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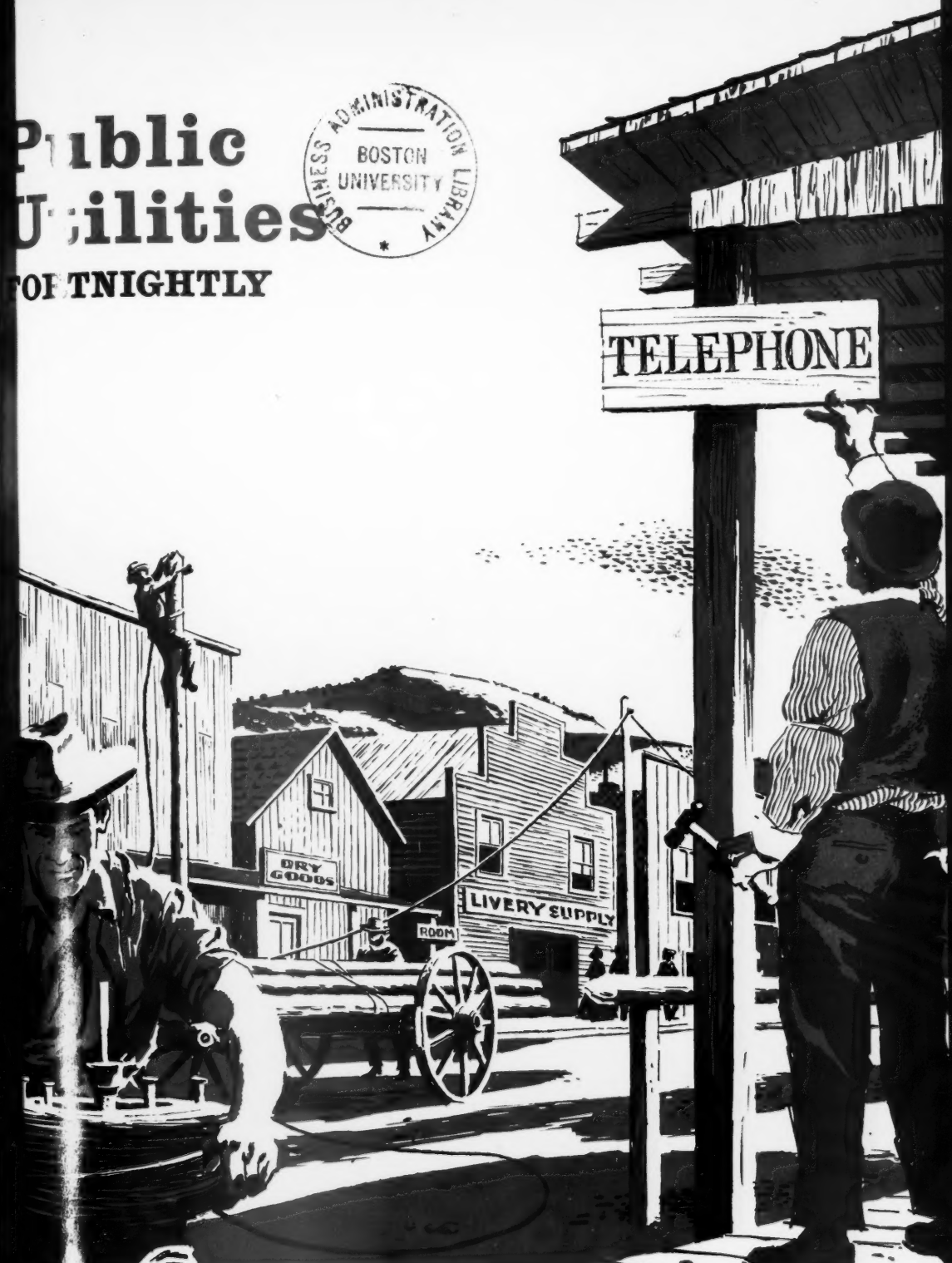

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Public Utilities

FORTNIGHTLY

VOLUME 60 OCTOBER 24, 1957 NUMBER 9

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State commissions having jurisdiction over telephone and telegraph matters are primarily concerned with intrastate aspects.

Telephone Companies That Earn Well, Serve Better ..... *E. Hornsby Wasson* 646
The matter of adequacy of earnings is one that confronts most, if not all, telephone companies, large and small.

Bedrooms Can Add 70 Million Telephones ..... *James H. Collins* 656
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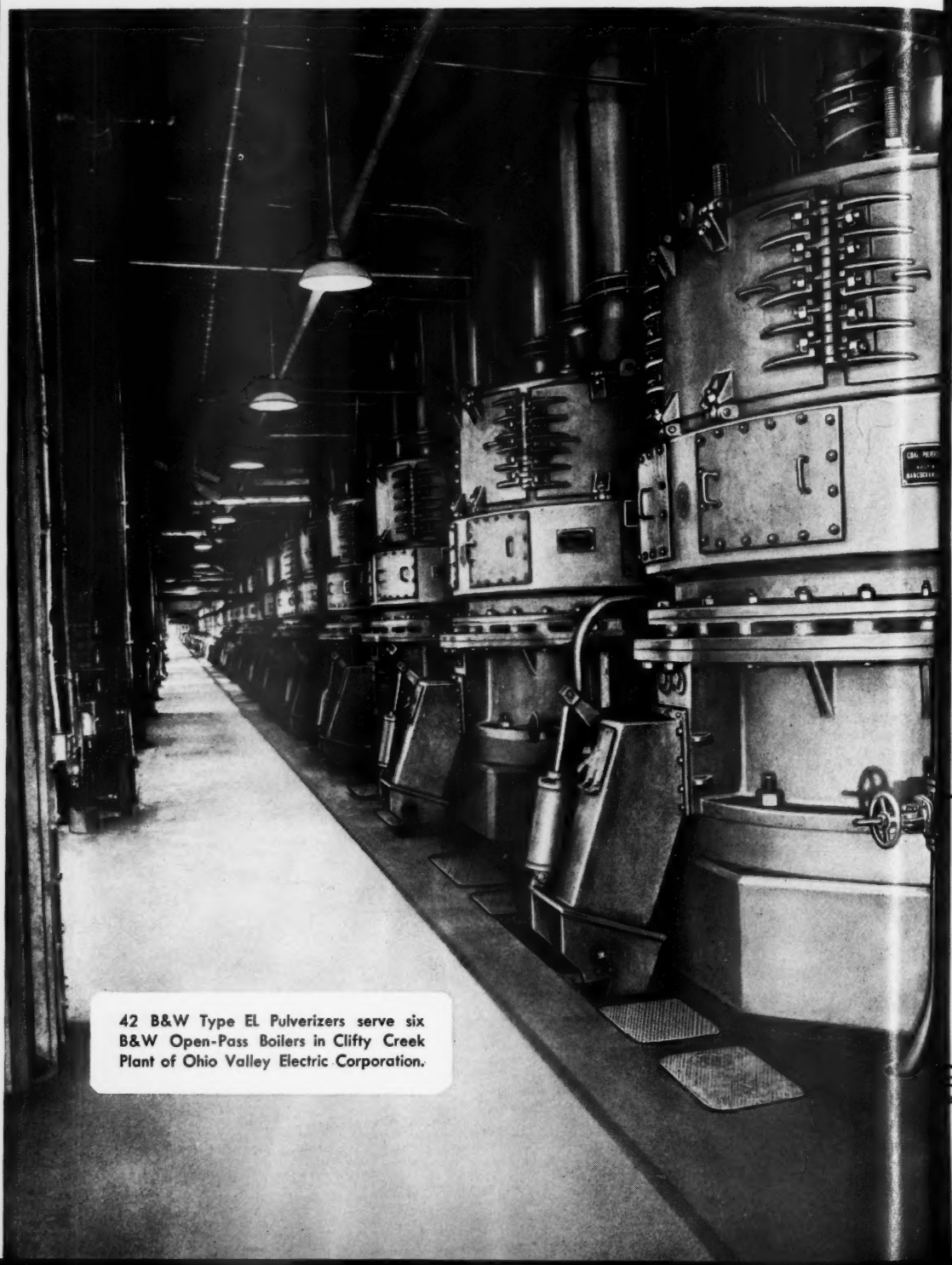

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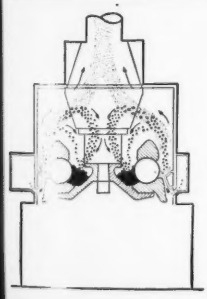
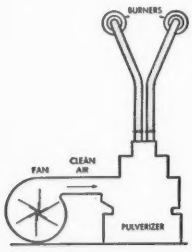
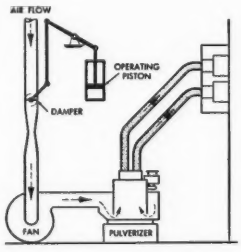


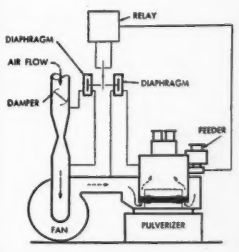
AL RECIRCULATION — this ans high fineness, aids drying.



PRESSURE SYSTEM — this eliminates fan wear, simplifies piping.



AIR CONTROL—this means one, simple control contact point.



MILL LEVEL CONTROL — this automatically adjusts fuel-feed.

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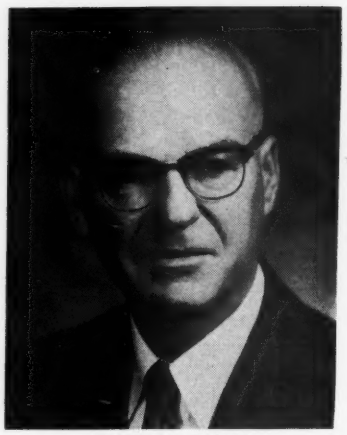
Pages with the Editors

IN this issue we pay special tribute to the independent telephone industry whose national association celebrates its sixtieth anniversary this year. That is the United States Independent Telephone Association which will hold its sixtieth annual convention at the Conrad Hilton Hotel in Chicago, October 14th to 16th, inclusive.

IT was in 1897—just three years after the basic patents on the invention of the telephone granted to Dr. Alexander Graham Bell had expired—that the independent companies formed their national association. It is probably not generally known today, when the relations between the independents and Bell system companies are most cordial and co-operative, that the original national association of independents was founded as a protest movement.

THERE were, of course, few independents before the Bell patents expired in 1893 and 1894. But at that time, the field was thrown wide open for the manufacture and use of telephone equipment. So it was that independent companies—meaning those not associated or affiliated with the Bell system—sprang up like June clover all over the country. This is especially true in the small towns in rural areas where the Bell companies have been unable to extend their services.

E. HORNSBY WASSON



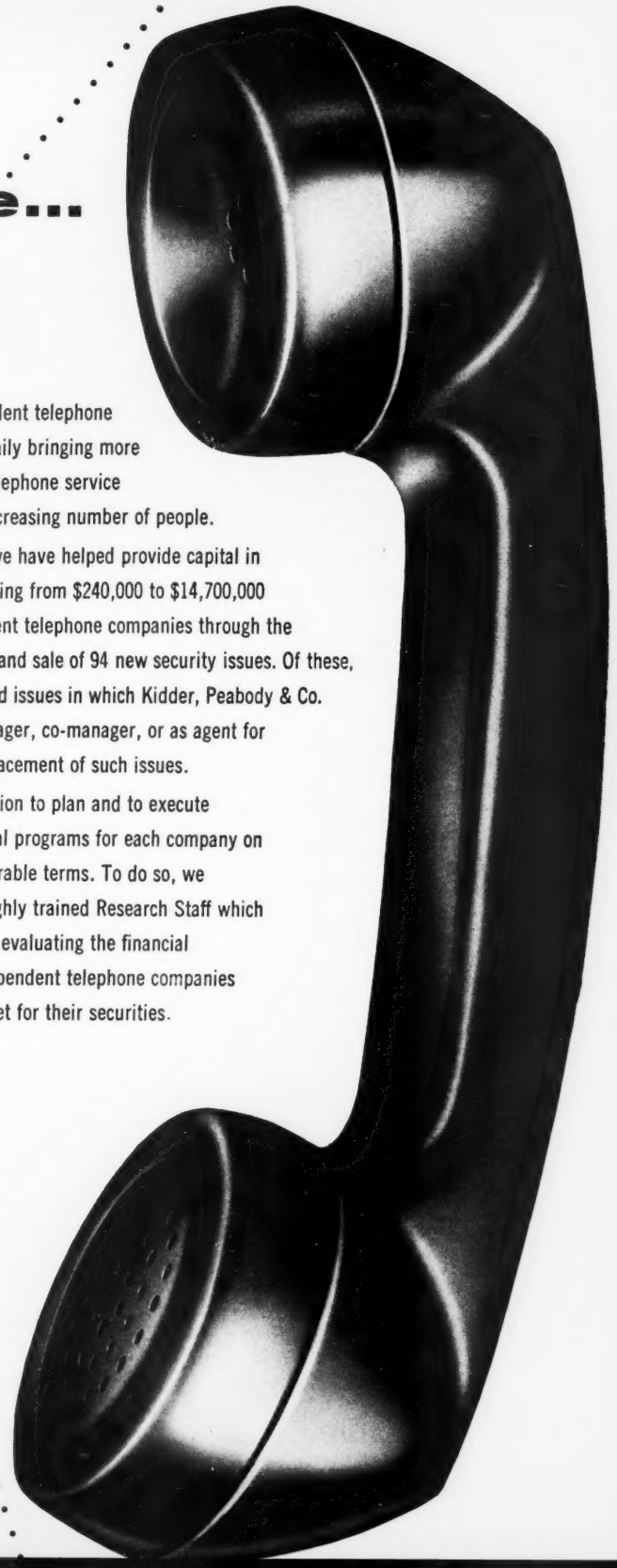
CLIVE W. HAAS

BUT the expiration of the Bell patents did not end the spirited rivalry between the two groups. And the founding of the national association of independents in 1897 was virtually a call to arms to resist the "aggressions" of the Bell companies. This rivalry and competition persisted well into the early years of the twentieth century before its futility was recognized on both sides.

TODAY, the independents celebrate their sixtieth birthday as a national group with a record of service to 9.5 million subscribers in the United States over nearly 11,000 exchanges with a plant investment of approximately $2.4 billion. Furthermore, these 4,400 independent companies which serve two-thirds of the land area of the United States are growing swiftly in the scope and importance of their operations.

THE opening article in this issue comes to us from the vice president of the USITA who, according to tradition, will probably be the next president of that association by the time this magazine is in general circulation. He is CLIVE W.

worthwhile...



The independent telephone industry is daily bringing more and better telephone service to an ever-increasing number of people.

Since 1947, we have helped provide capital in amounts varying from $240,000 to $14,700,000 for independent telephone companies through the underwriting and sale of 94 new security issues. Of these, 63 represented issues in which Kidder, Peabody & Co. acted as manager, co-manager, or as agent for the private placement of such issues.

It is our function to plan and to execute sound financial programs for each company on the most favorable terms. To do so, we maintain a highly trained Research Staff which is continually evaluating the financial needs of independent telephone companies and the market for their securities.

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HAAS, manager of the Big Timber Home Telephone Company of Big Timber, Montana.

It has been called one of the best little exchanges in the country. And it is perhaps symbolical of the democratic spirit of the USITA that MR. HAAS, a small company executive, will doubtlessly succeed the president of the very largest independent telephone company system, Donald C. Power, president of the General Telephone Corporation, who contributed to the telephone issue of this magazine just a year ago.

MR. HAAS, who tells us about USITA and the work it does for the independent companies, was born on a farm near Milbank, South Dakota, on October 20, 1896. His father took a homestead grant 25 miles from Big Timber, Montana, when he was only a boy of twelve. He helped to build the first roads, fences, and schools in the area. Following service in the Navy in World War I, he attended the University of Minnesota and the University of Washington, studying architecture. He started his business career with the Montana Power Company in 1922 and in 1926 made the down payment on the stock of the local telephone company with which he is now connected.

* * * *

THE Bell system is represented in this issue by the vice president of the American Telephone and Telegraph Company, E. HORNSBY WASSON, whose article on the need of telephones for more revenue begins on page 646. Like many other Bell system executives, MR. WASSON came up from the ranks. Beginning as a salesman in Chattanooga, Tennessee, in 1926 with the Southern Bell Telephone & Telegraph Company, he worked up to the position of general commercial manager in Atlanta in 1947. Then he was transferred to Northwestern Bell Telephone Company at Omaha as vice president of public relations. Five years ago he moved to New York with the AT&T organization. Since last March he has been vice president in charge of rates and revenues.

L. GLEN SNARR

THE regulatory viewpoint on telephone service is represented in this issue by the article beginning on page 639 by RULOM E. LARSEN, director of utilities for the Idaho Public Utilities Commission. He is a native of that state and attended the University of Idaho, studying accounting and public administration. He is a certified accountant who first joined the staff of the Idaho commission in 1946 following naval service in World War II.

* * * *

L. GLEN SNARR, whose article on telephone and gas industry co-operation in pipeline construction begins on page 668, combines magazine writing with his career as an advertising executive. His articles have appeared in *Coronet, American Magazine, Business Week,* and other publications. He is an account executive in the advertising firm of David W. Evans & Associates in Denver.

* * * *

THE production-minded telephone industry has found that certain principles long used elsewhere can be adapted to telephone company use. Independent and Bell system telephone companies have found this path. What is being done in the selling line is told by JAMES H. COLLINS in his article, beginning on page 656.

THE next number of this magazine will be out November 7th.

The Editors

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This company is one of the eleven largest Independent telephone companies in the United States. It is the largest Independent in Nebraska, operating about one-fourth of the telephones in the state. It serves 125 exchanges in the southeast 22 counties of the state, an area rich in agricultural and industrial production

Formerly largely dependent on agriculture, the state last year drew almost twice as much of its income from non-agricultural as from agricultural sources. Farm income is stabilized by the rapid expansion of irrigation. Nebraska leads the nation in such expansion with an 82% increase in the last five years. An abundant underground water supply is attractive both to industry and agriculture. Other business advantages of the area include a dependable labor supply, excellent transportation facilities, central location and adequate power—all factors conducive to growth.

LT&T has doubled its investment in the past nine years to keep ahead of customer demands. A $42 million company, it now operates 131,000 telephones, 81% of which are dial. Target date for 100% dial operation is 1962. Direct distance dialing, first in Nebraska, was established this year at five exchanges and all exchanges have direct connection with the national operator toll dialing network.

Now in its second 50 years, the company has direct connection with the transcontinental radio-relay system and is now installing radio-relay to connect three of its major exchanges. It is equipped to provide modern telephone communication to meet any customer need.

The Lincoln Telephone and Telegraph Company

Coming IN THE NEXT ISSUE

(November 7, 1957, issue)

★

A REGION LOOKS TO ITS POWER SUPPLY

Public utility companies in some areas are finding it necessary and desirable to co-operate with REA co-operatives and government-owned and-operated utilities in order to work towards a common goal. That goal is to improve the operating efficiency of each power supplier through joint planning so that all customers will be assured of inexpensive and dependable service. Allen S. King, president of Northern States Power Company, discusses such regional responsibility.

ENGINEERS AS REGULATORY COMMISSIONERS. PART I.

Dr. Lincoln Smith, who has made an extensive study of the professional background and organization of our state regulatory commissions, has taken up the question of the engineer's rôle in a modern state regulatory commission. Is it of advantage to have an engineer on the commission itself, or does the engineer function more effectively as a specialized staff official?

GOVERNMENT DEBT IN A FREE ECONOMY

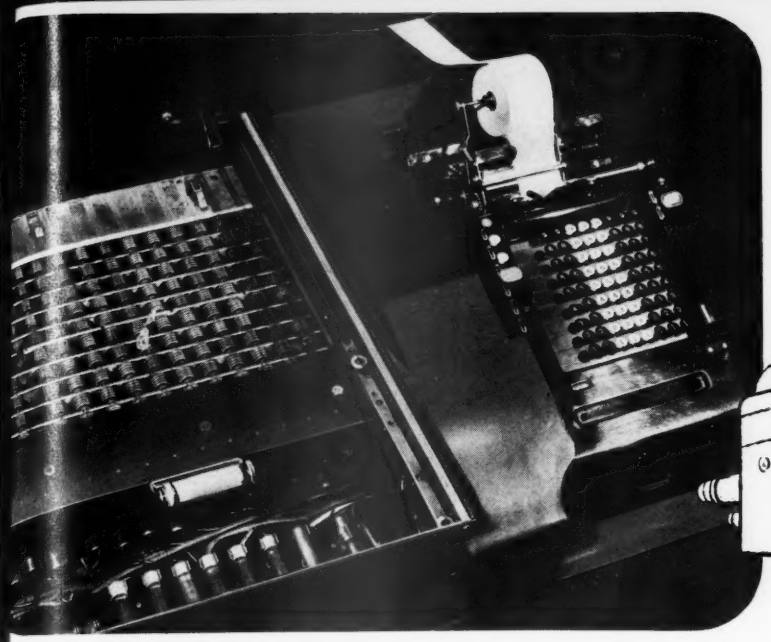
Government debt and inflation are subjects of continual interest in view of the current tight money policy which seems to be of increasing concern to operating utilities. Cecil L. Dunn, manager of the rate department, Southern Counties Gas Company of California, points out that inflation, the central problem of public utility economics since the end of World War II, has become permanent. Cheaper money and dearer goods have come to stay.

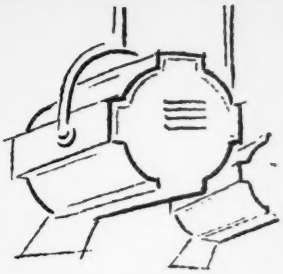
APPENDIX—AMERICAN BAR ASSOCIATION—LONDON, ENGLAND

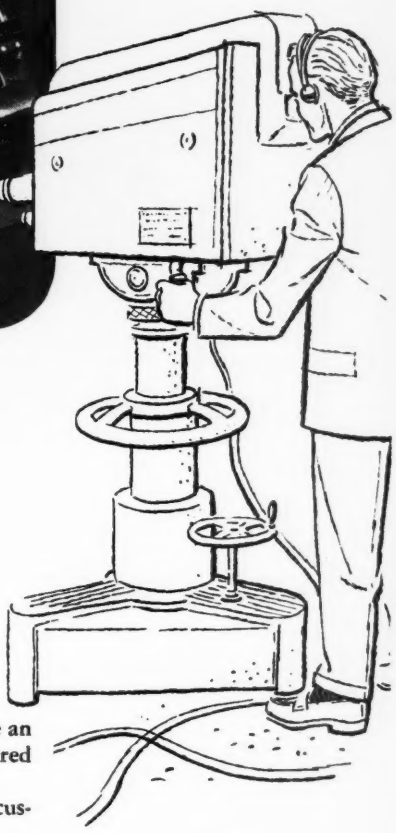
The annual convention of the American Bar Association during the past summer was held in two cities and two countries. The New York city sessions of the Section of Public Utility Law were held July 11th to 13th. Addresses at those sessions were published in PUBLIC UTILITIES FORTNIGHTLY, issue of September 26th. Subsequently the Section of Public Utility Law held sessions in London, England, on July 25th and 26th. The remaining papers at the London sessions will be carried as an Appendix.

★

Also . . . ***Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.***







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CLEO F. CRAIG
Former chairman of the board, American Telephone and Telegraph Company.

"All our history tells us that the right way to live and work and achieve is to give men real freedom to become all they can be."

RICHARD M. NIXON
Vice President of the United States.

"[There are indications that] people generally are going to react unfavorably to the federal government whenever it means more spending."

BENJAMIN F. FAIRLESS
President, American Iron and Steel Institute.

"While candidates for sainthood are not in generous supply in the business community, the proportion of rascals is no greater than that found among other groups of people."

HOWARD I. HOLLANDER
Manager, methods department, National Cash Register Company.

"Automation, whether in the plant or in the office, is the substitution of a more sophisticated level of mechanization for human effort, particularly in the area of repetitive processing and predetermined routine decision making."

THOMAS B. STANLEY
Governor of Virginia.

"There is no excuse for federal competition with private industry when private enterprise is ready and willing to provide the required product or service. Flood control is one thing and the generation of electricity is another."

CARROL M. SHANKS
President, Prudential Insurance Company of America.

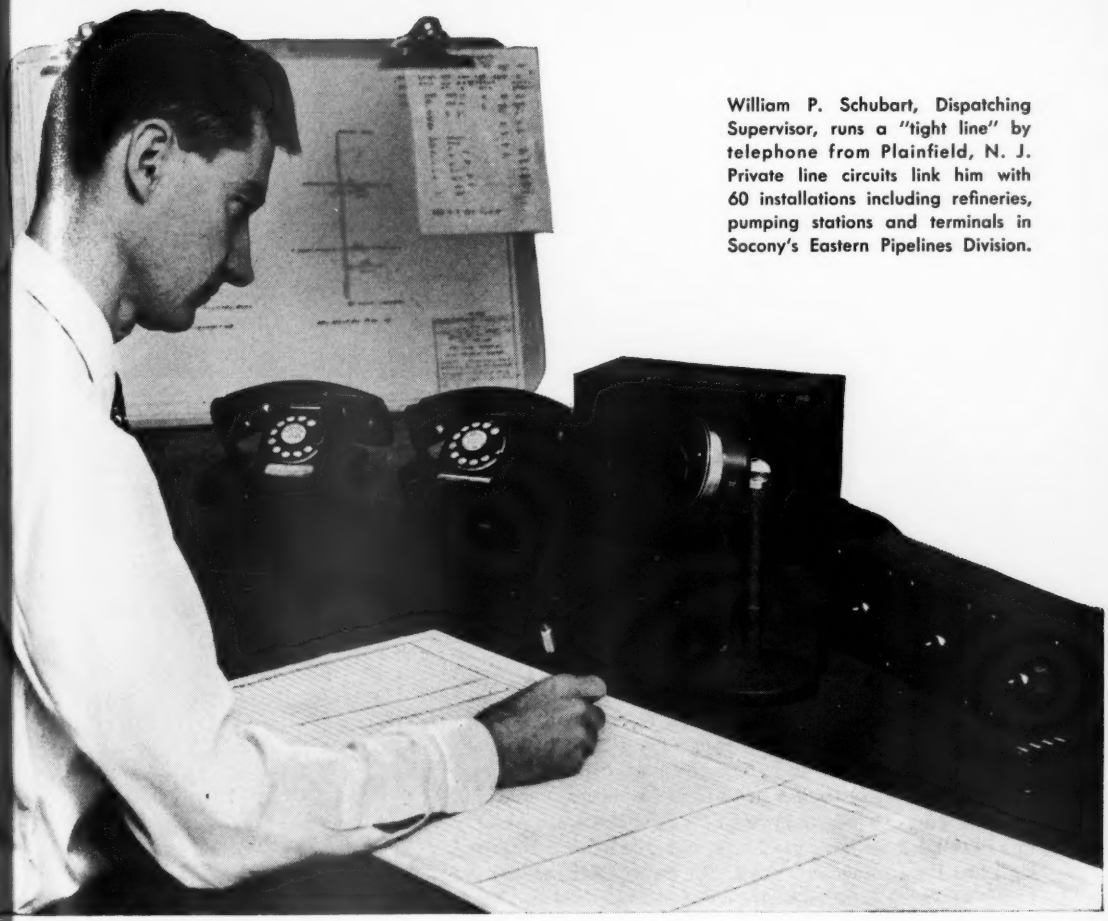
"Life insurance companies would be better off 'if they held more common stocks.' They should participate more than they do in equity financing. I see no reason why they could not with safety have as much as 10 per cent of their assets in common stocks."

EDITORIAL STATEMENT
The Economist.

"All governments, like all men, 'would be tyrants if they could'; and in a way democracies (and welfare states), which should be best at tying tyrants' hands, are worst of all, because the bureaucrats have such good credentials. The honest, able, and dutiful civil servant who brushes aside individual objections in an ever-widening field does so in the name of the people—for the public good . . ."

FREDERICK R. KAPPEL
President, American Telephone and Telegraph Company.

"So far this year the system has sold $530 million of bonds and plans have been announced for the sale of $250 million more. Other debt issues are contemplated. The high cost of money, along with the continuing increase in other costs, emphasizes more than ever the need for telephone rates that produce good earnings. At present the rate of earnings on the total capital invested in the Bell system is 6.8 per cent. We are convinced the rate should be higher and are working to that end."



William P. Schubart, Dispatching Supervisor, runs a "tight line" by telephone from Plainfield, N. J. Private line circuits link him with 60 installations including refineries, pumping stations and terminals in Socony's Eastern Pipelines Division.

He's keeping track of 40 batches by private line telephone service

Using Bell System private line telephone service, Plainfield, N.J., dispatcher of Socony Mobil Company keeps multi-product traffic flowing through three different pipeline systems. Up to 40 batches of different products are en route at the same time.

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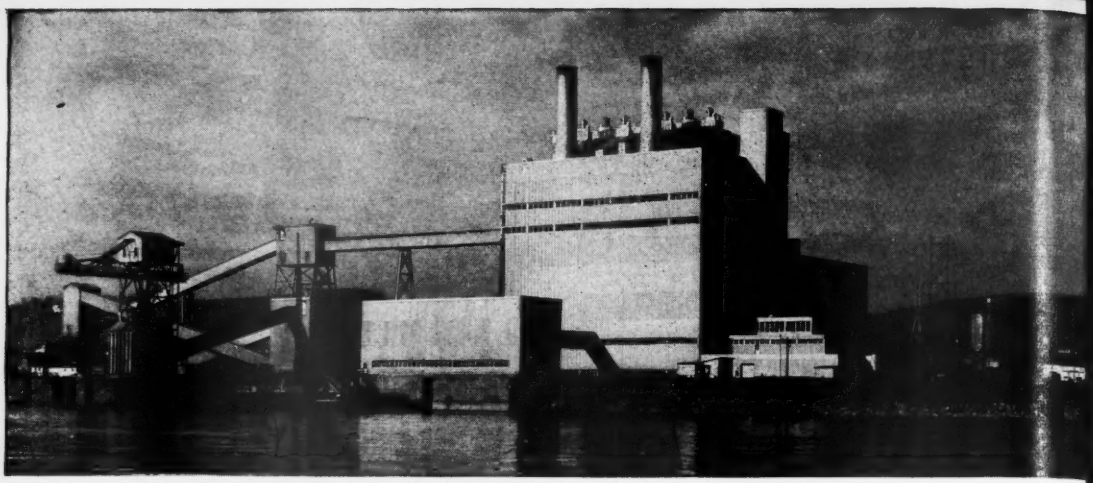

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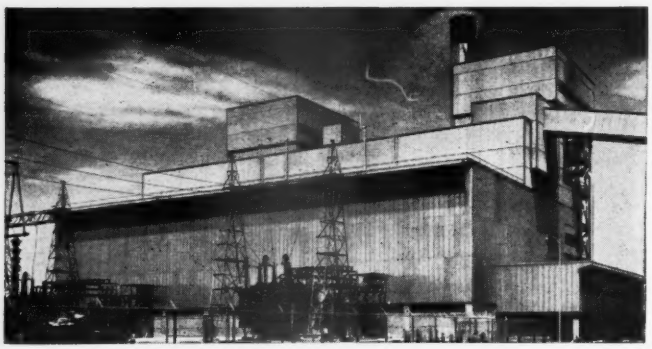

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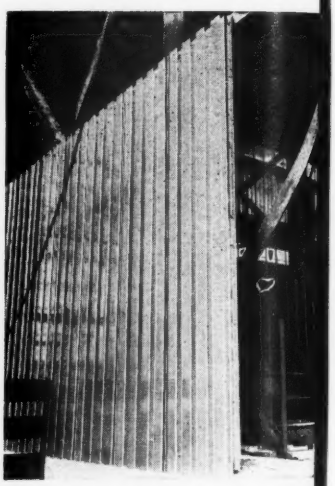

Q-Panel walls (above) go up quickly any weather because they are dry hung in place, not piled up.

More than 32,000 sq. ft. of Q-Panels we to enclose the impressive Hawthorn Electric Station (left) of the Kansas City souri, Power and Light Company. Ebas vices, Inc., designed and built the plant

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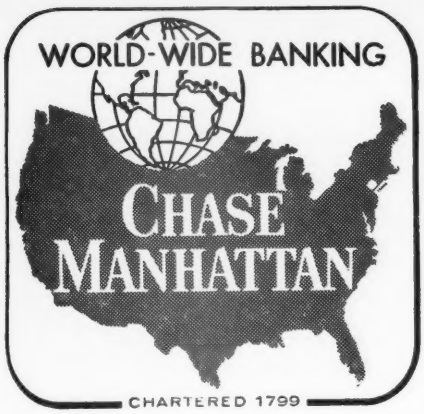


specialized
banking service for the

TELEPHONE INDUSTRY

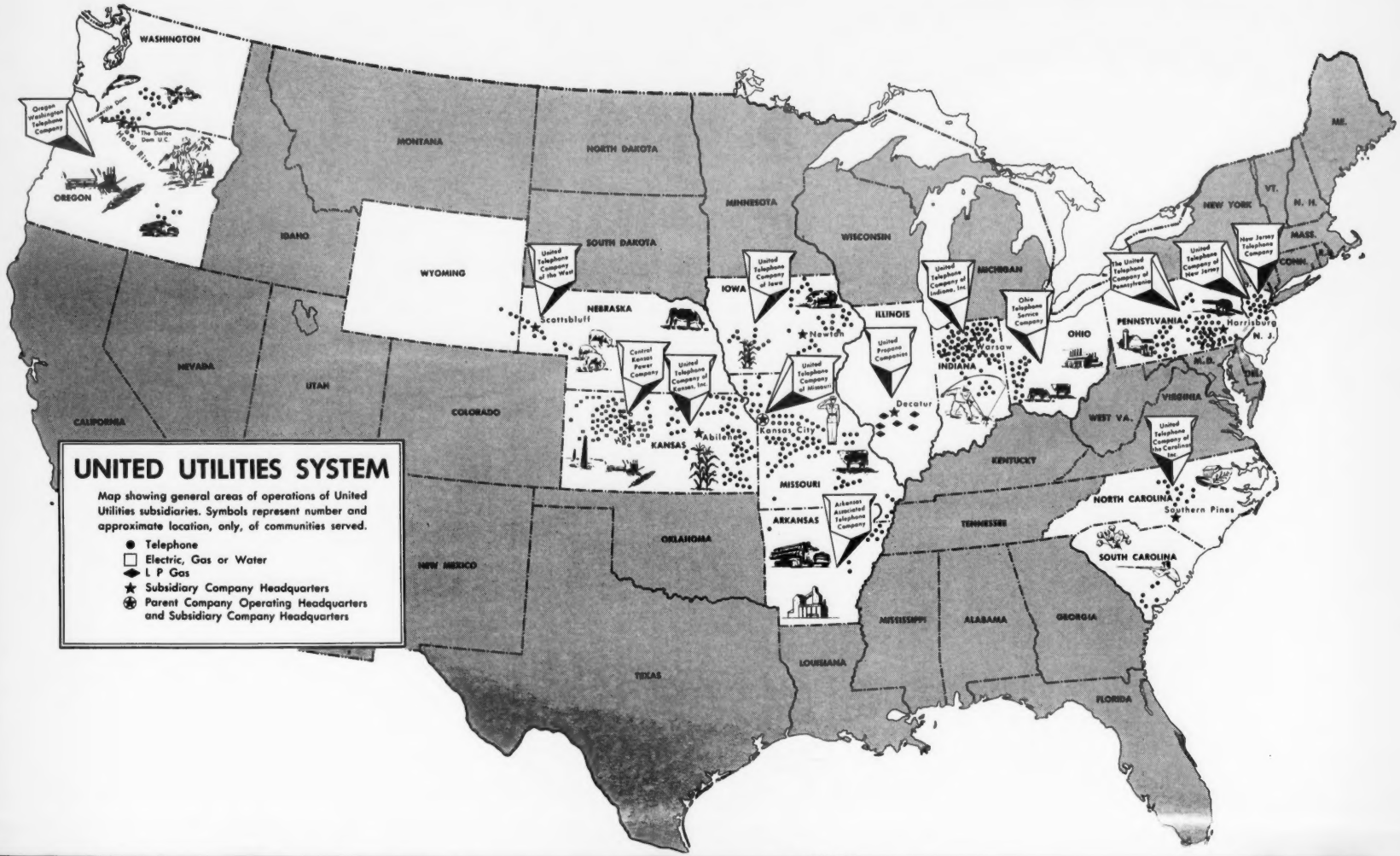
The Chase Manhattan Bank has a special staff with many years of experience in providing companies of the telephone industry with banking services suited to their needs.

Among these special services is an employee retirement plan for member companies of the United States Independent Telephone Association. The Chase Manhattan Bank, as trustee of this plan, will welcome inquiries addressed to the Pension Trust Division, Chase Manhattan Bank, 40 Wall Street, New York 15, N. Y.

In this, and in its other banking services, Chase Manhattan is continuing to serve the vital and growing telephone industry.

THE
CHASE MANHATTAN
BANK

HEAD OFFICE: 18 Pine Street, New York 15
Member Federal Deposit Insurance Corporation



UNITED UTILITIES SYSTEM

Map showing general areas of operations of United Utilities subsidiaries. Symbols represent number and approximate location, only, of communities served.

- ● Telephone
- □ Electric, Gas or Water
- ◆ L P Gas
- ★ Subsidiary Company Headquarters
- ✱ Parent Company Operating Headquarters and Subsidiary Company Headquarters

UNITED UTILITIES, INCORPORATED

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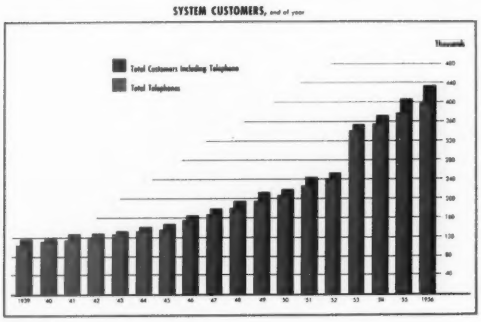
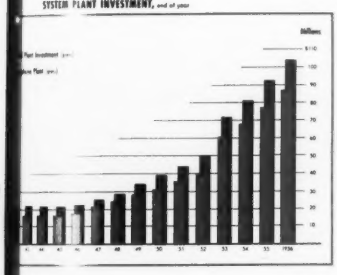
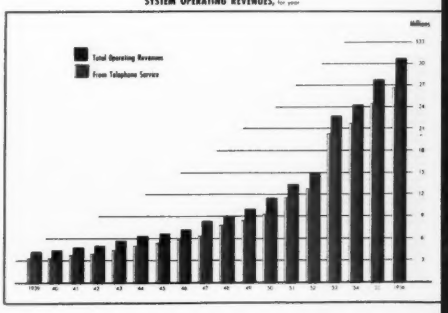
GRAPHIC PORTRAYAL OF GROWTH OF UNITED UTILITIES SYSTEM

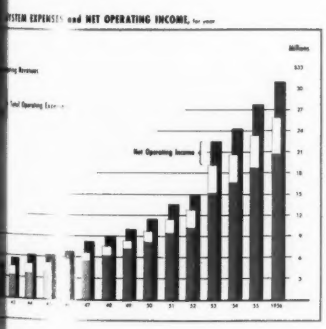


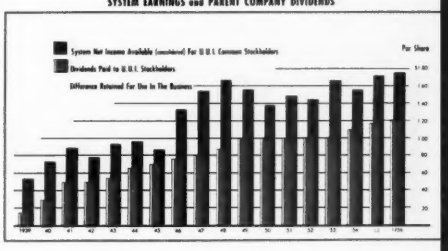




UNITED UTILITIES SYSTEM

UNITED TO SERVE




SYSTEM EARNINGS and PARENT COMPANY DIVIDENDS
Dividends Paid to U.U.I. Stockholders
Difference Returned for Use in The Business

NATURAL GAS — LIQUID PETROLEUM GAS

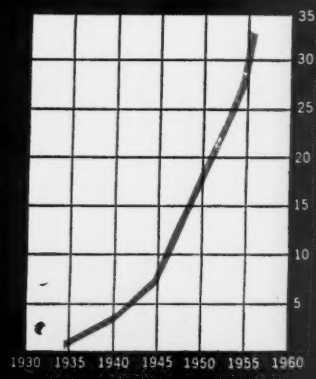
BY PIPE LINE

BY TRUCK

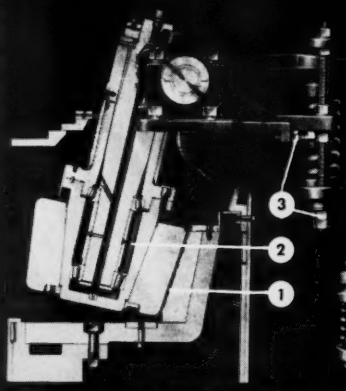
Above information taken from 1956 annual report. Copy available upon request.

Why the Bowl Mill is

AMERICA'S No. 1 PULVERIZER

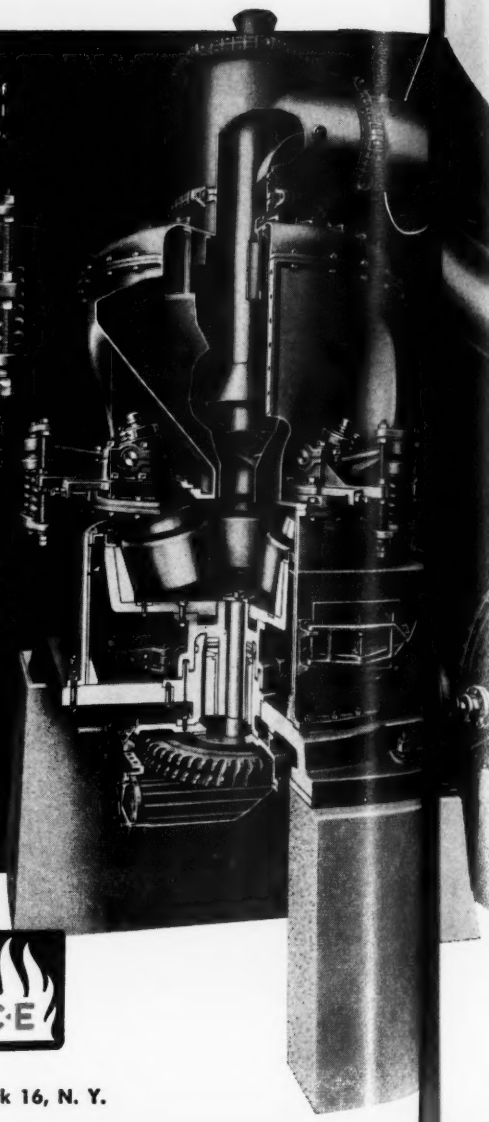


This chart presents a quick picture of the tremendous acceptance of the Bowl Mill since its introduction in 1935.



Cutaway view showing assembly of roller journal in bowl. Note: 1 — no metal-to-metal contact; 2 — self contained lubrication system (no grease cups); 3 — convenient method of adjustment without dismantling.

Looking down on top of mill. See handy arrangement of levers which adjust vanes — while in operation — to control fineness of coal leaving mill.



COMBUSTION ENGINEERING

C-E

Combustion Engineering Building • 200 Madison Avenue, New York 16, N. Y.

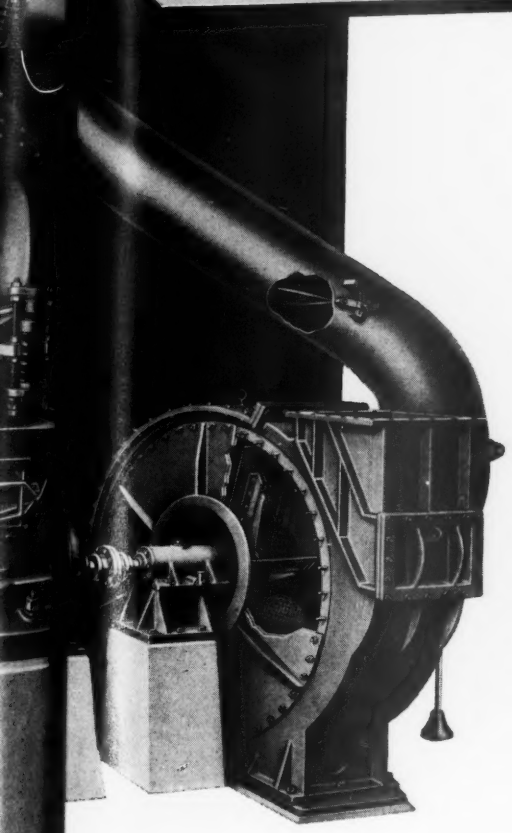
Canada: Combustion Engineering-Superheater Ltd.

B-987

A first-class pulverizer should possess certain basic capabilities of which the following — most operators will agree — are the most important. They are the ability to . . .

- *handle high moisture fuels without difficulty*
- *operate with low power requirement*
- *stay in continuous service for long periods*
- *operate with low maintenance costs*
- *permit convenient control of fineness while running*
- *adjust grinding pressure automatically*
- *lubricate, when required, while in operation*
- *operate quietly and without vibration*

It is because the C-E Raymond Bowl Mill measures up on *all* these points that it has long been regarded by many leading power engineers as the country's No. 1 pulverizer. The reasons why the Bowl Mill is an outstanding all-around performer are summarized below.



HIGH MOISTURE — The most effective means of achieving good pulverizing results with high moisture fuels (16 — 18% — Eastern coal, 24% Midwestern, 45 — 50% lignites) are (1) by the admixture of fuel already dried in the mill with the raw feed and (2) by the use of high temperature air. The C-E Raymond Bowl Mill was designed to do both of those things, and does them well. Air temperatures of 700° F. and above can be utilized.

LOW POWER CONSUMPTION — Basic design characteristics of the Bowl Mill permit pulverizing at less power per ton of material than any mill now available. The rapid flow of material through the mill and the prompt removal of fine coal as it is produced prevents over-grinding. This, in conjunction with the relatively low mass of grinding elements and rapid drying action in the mill, assures minimum power consumption.

RELIABILITY — Design and materials are responsible . . . but results prove the point — such results for example as operating records of 8500, 10,000, 15,000, 20,000 continuous service hours without repair or replacement of parts.

MAINTENANCE — Bowl Mill maintenance cost has always been the lowest in the field. Continuing improvements in designs, materials and construction keep it that way. A minimum of outage time is required for dismantling and assembly. It's a matter of record in many plants that higher costs of material and labor over the past 15 years have not been reflected in increased maintenance cost per ton of coal pulverized.

FINENESS CONTROL — All necessary adjustments to control fineness of finished product can be made conveniently from the outside of the pulverizer *while it is in operation.*

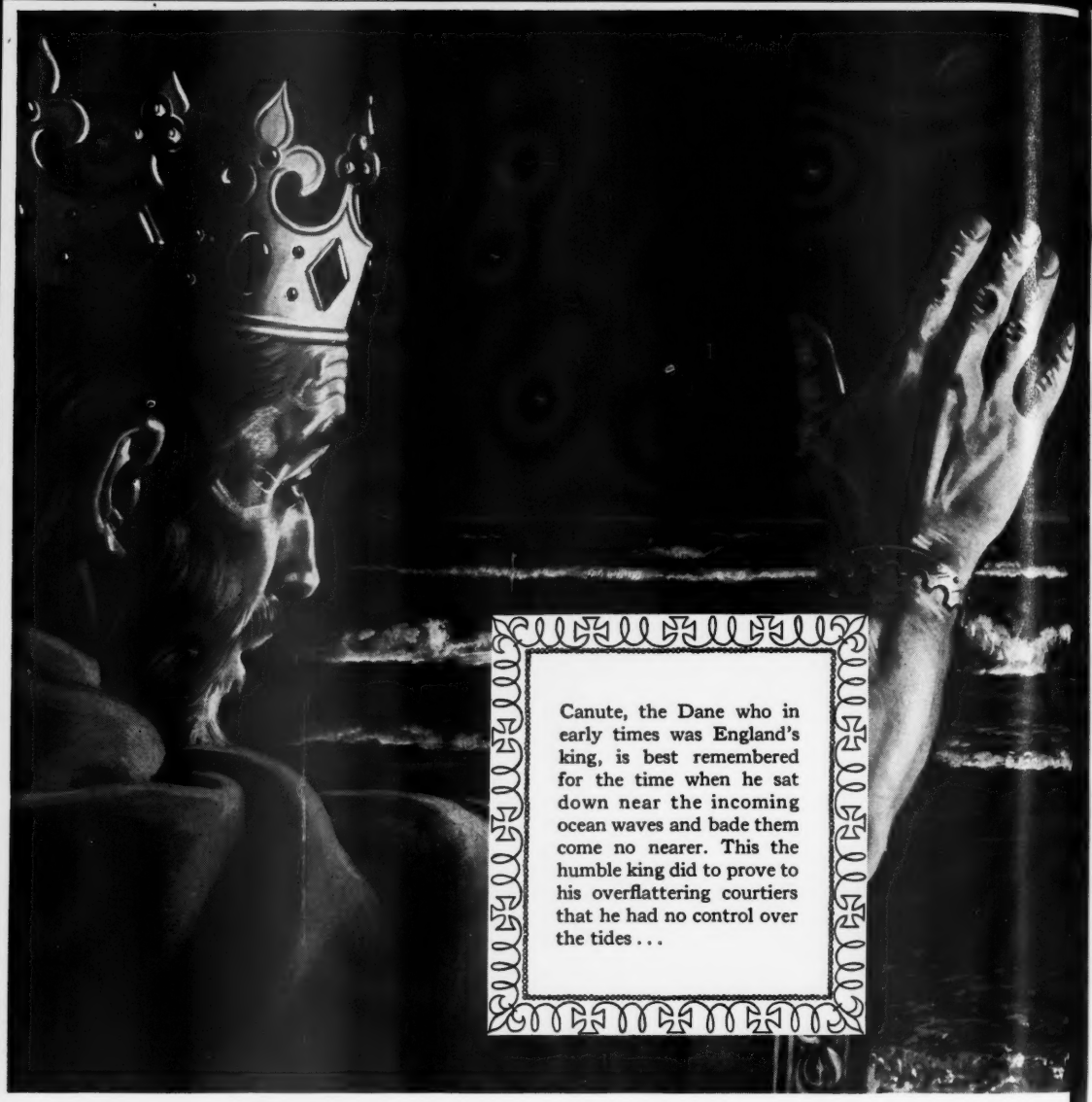
AUTOMATIC GRINDING PRESSURE — The arrangement of spring-loaded roller journals on the Bowl Mill provides automatic compensation for the variation in pressure between grinding surfaces required by variation in grindability of coals.

LUBRICATION — Is no problem with the Bowl Mill. When required — at infrequent intervals — all lubrication is handled from outside the mill while it is in service.

VIBRATIONLESS — QUIET — The Bowl Mill's grinding rollers make no metal-to-metal contact with the grinding ring, assuring quiet, vibrationless operation.

• • •

Whether you are evaluating pulverizers for your present plant expansion program or for future requirements, we suggest you use the above check list to get the facts. Send for Catalog PC-8 for further details.


Canute, the Dane who in early times was England's king, is best remembered for the time when he sat down near the incoming ocean waves and bade them come no nearer. This the humble king did to prove to his overflattering courtiers that he had no control over the tides . . .

STEMMING THE OCEAN TIDE

As King Canute nobly showed, no man, even in exalted position, can govern the elements . . . our efforts only can be toward resisting them. Kerite Cable, in submarine, underground and above-ground applications, has proved, over the years, singularly successful in resisting the destructive action of the elements —even of time itself. Small wonder the dependability, durability and unique superiority of Kerite Cable insulation have been relied on for years, the world over, wherever formidable cable problems present themselves.

The value and service life of a product can be no greater than the integrity and craftsmanship of its maker.

Founded 1854

KERITE CABLE

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Offices also at 122 S. Michigan Ave., Chicago; 582 Market St., San Francisco;
3901 San Fernando Rd., Glendale 4, Calif.; 31 St. James Ave., Boston

60 Years OF PROGRESS

On this 60th anniversary of the United States Independent Telephone Association, it is fitting to reflect on the enviable achievements of the Independent Telephone Industry. Since 1897, the Telephone Industry has met the challenge of the changing times with much foresight and resourcefulness. In keeping pace with the urgent demands of a free and rapidly expanding economy, Independent Telephony has contributed immeasurably to our American way of life.

L. M. Berry and Company is happy to commemorate this occasion because we are proud to have served the Independents in the field of Telephone Directory Advertising for 47 years . . . and to have become an integral part of the Telephone Industry and its progress. Every year since 1910, we have enjoyed a closer relationship with Independent Telephony as more and more Independent Companies have found greater satisfaction, profits, and convenience in our services. We are most grateful to the Independent Telephone Industry for giving us the opportunity of sharing in its contributions and growth.

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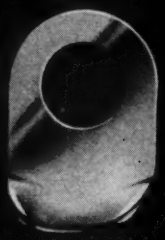
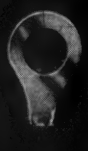


ALL TERMINALS SHOWN ACTUAL-SIZE

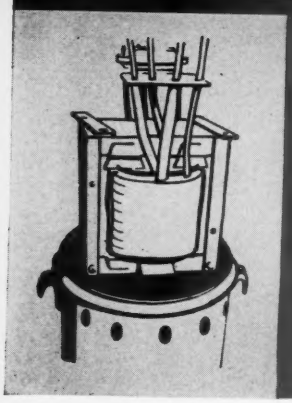


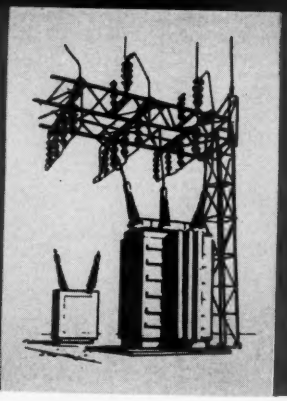
SOLISTRAND®
22-600 MCM AWG

Ampli-Bond®
8-4/0 AWG

DIAMOND GRIP
26-10 AWG

PRE-INSULATED DIAMOND GRIP
26-10 AWG





SOLISTRAND Butt and Parallel Connectors for innercoil connection to leads. SOLISTRAND Terminals on outside leads of transformers.

PRE-INSULATED DIAMOND GRIP and DIAMOND GRIP Terminals and Connectors for switchgear panel wiring in generator plants and sub-stations.

SOLISTRAND and AMPLI-BOND Terminals and Connectors for construction and maintenance of generator plants and sub-stations.

PRE-INSULATED DI[illegible]-INSU
MOND GRIP and SO[illegible]ND GRI
STRAND Terminals [illegible]P, and
Connectors for street [illegible]s find ex
traffic light installati[illegible]ruck a
and maintenance. [illegible]tenanc

TERMINAL PRODUCTS UTILITY INDUSTRY...

AMP's diversified lines of terminal and connector products . . . and matched precision-engineered application tooling . . . have been part of the utility industry's components story, in many ways, for many years. These products have been designed for the exacting requirements of the electrical industry in general, and a predominant number of original equipment items depend on the AMP method of termination and connection for service reliability.

AMP's diversified lines of terminal and connector products include:

SOLISTRAND® —of one-piece construction, for application to stranded, solid or irregularly shaped conductors.

DIAMOND GRIP —non-insulated, but having metallic sheath to provide full circumferential support to cable. Excellent for applications where resistance to vibration is a factor.

Ampli-BOND® —provide full insulation support for large wire sizes. They are bonded and reinforced to prevent relaxation of cable support.

PRE-INSULATED DIAMOND GRIP —insulated with tough plastic that won't come off . . . it's bonded. Affords optimum performance under vibration.

Some typical applications of these A-MP products are shown below.

AMP's continuing programs of research and development are increasing the potential of newer products to speed operations, reduce costs, and improve reliability for all phases of utility activity.

A-MP products, when required for maintenance and repair needs, are available in the U. S. A. through American Pamcor Inc. api AMERICAN PAMCOR INC.

For additional information write to:

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7537 Eisenhower Boulevard, Harrisburg, Pa.

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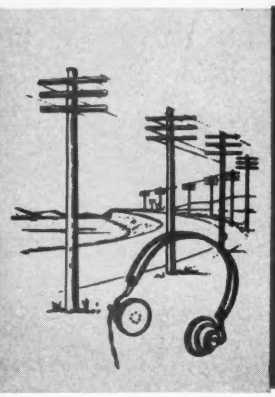
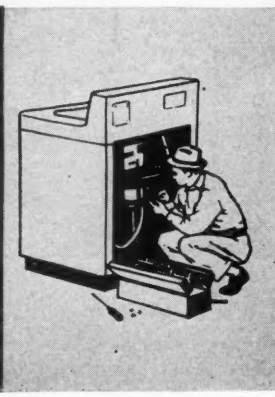
Distributor in Japan: Oriental Terminal Products Co., Ltd., Tokyo, Japan

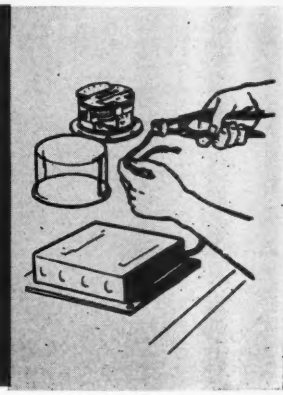
-INSULATED DIA-
D GRIP, DIAMOND
, and SOLISTRAND
s find extensive usage
ruck and car fleet
tenance.



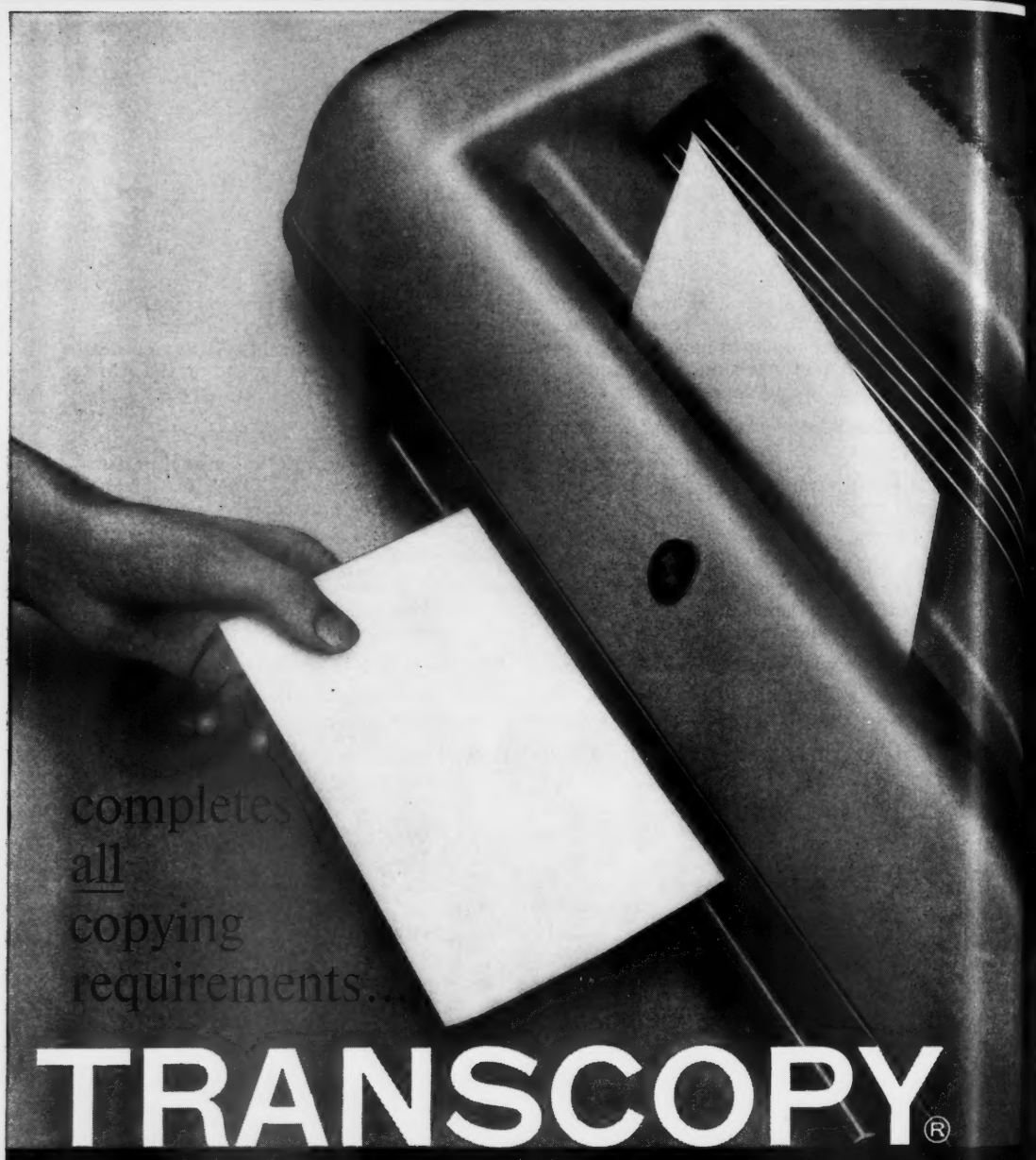
PRE-INSULATED DIA-MOND GRIP Terminals and Connectors for communications equipment.



PRE-INSULATED DIA-MOND GRIP, DIAMOND GRIP and SOLISTRAND types for appliance repairs.



PRE-INSULATED DIA-MOND GRIP, DIAMOND GRIP and SOLISTRAND types for meter repairs.



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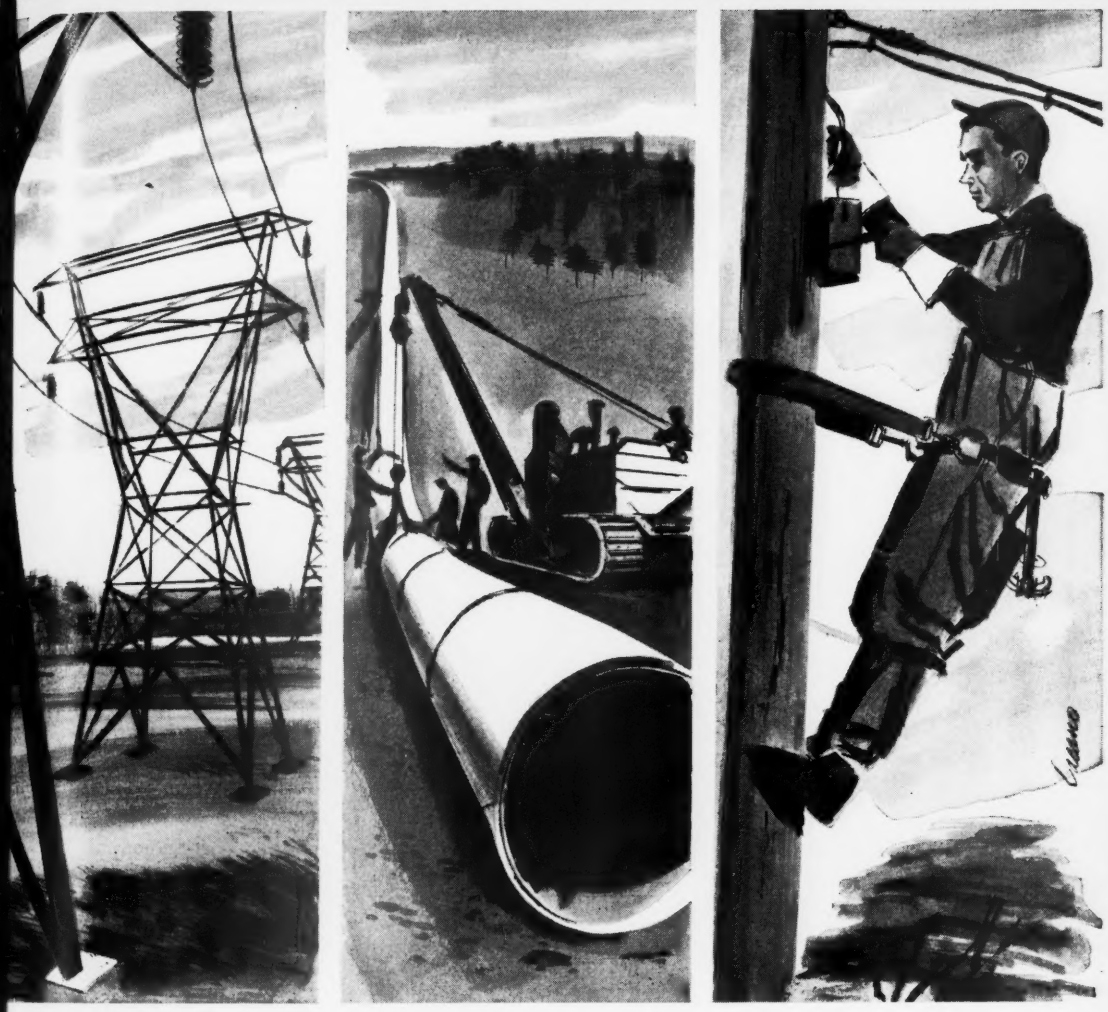

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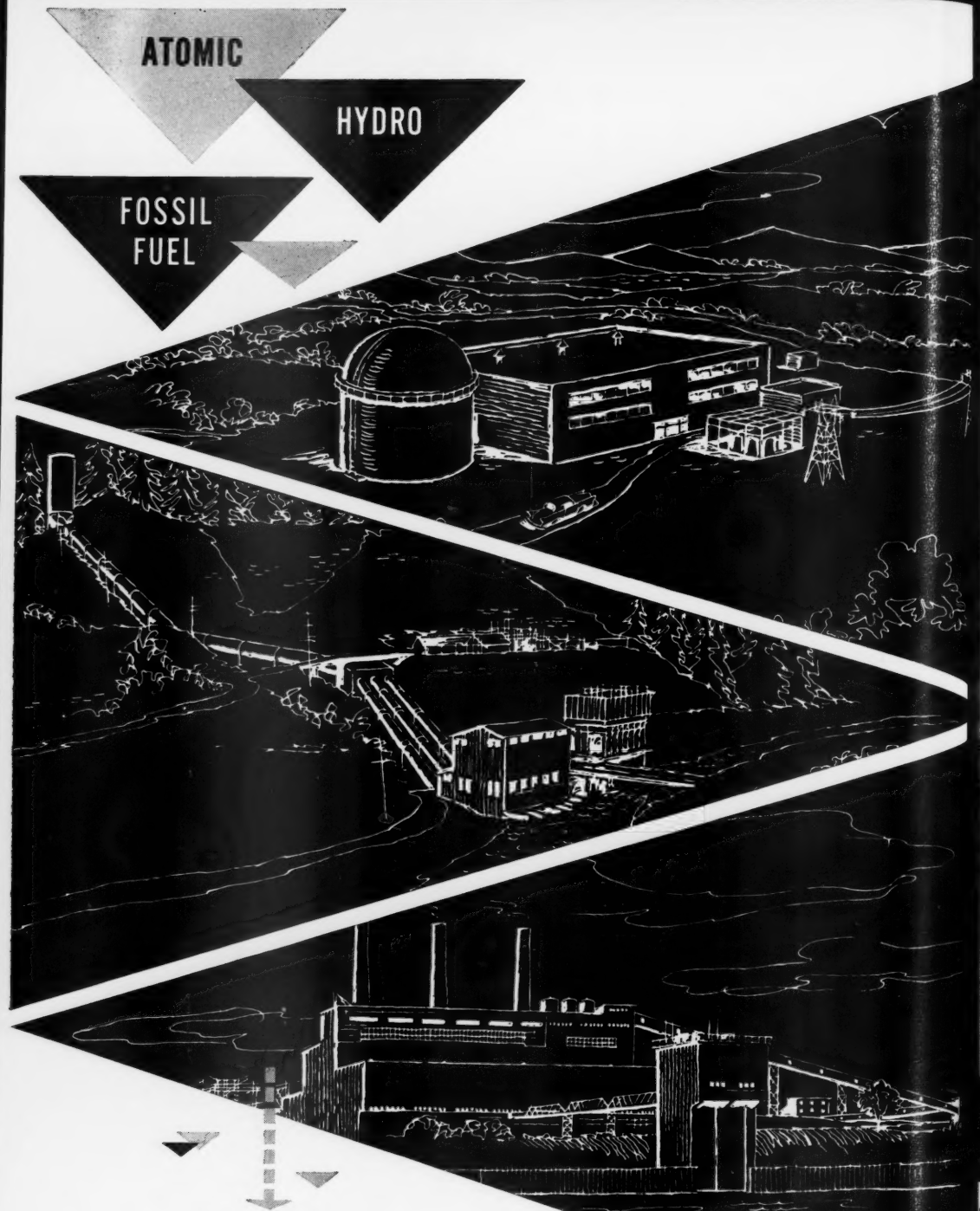

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AREAS IN THE CENTRAL PART
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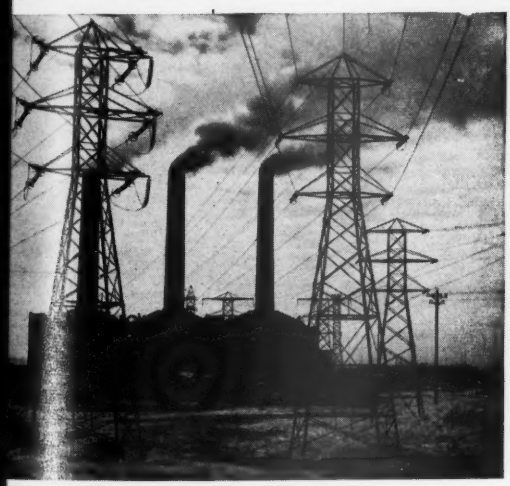

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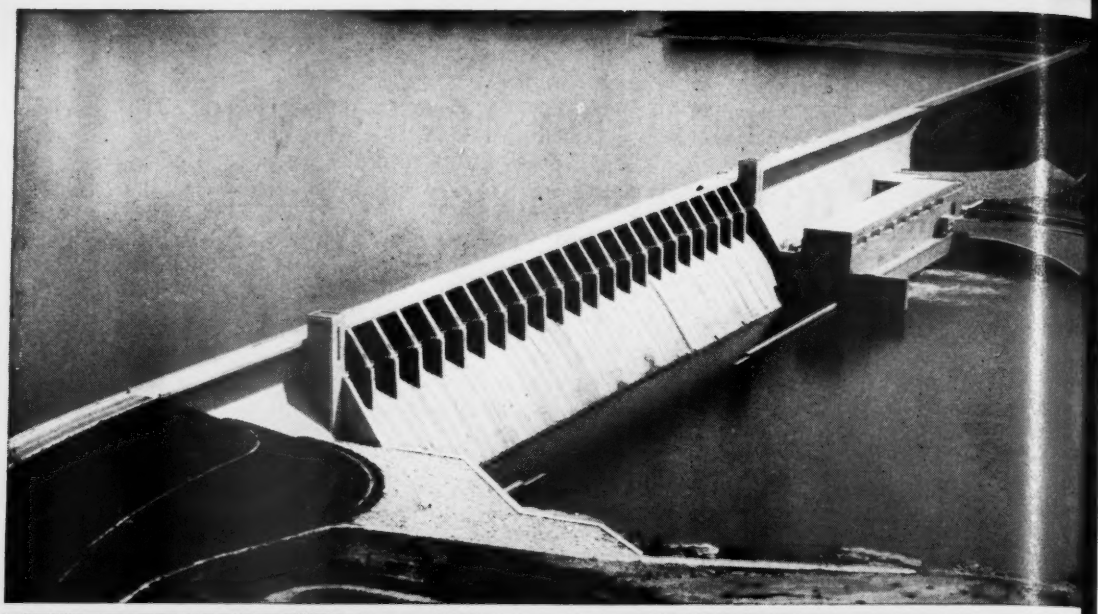

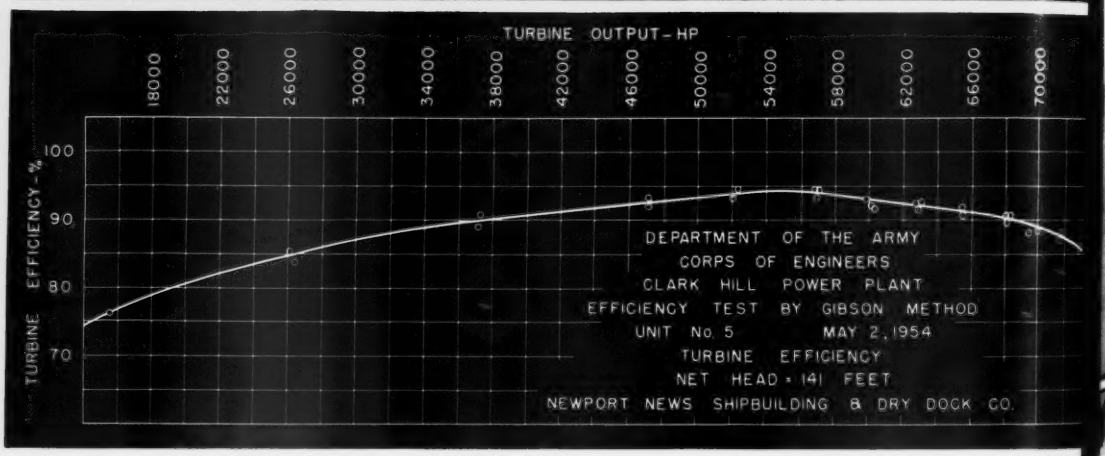

Maximum efficiency of 94.1%

Reflects advanced practices at Newport News

THE GRAPH shows performance of a 55,000 horsepower turbine, one of seven such units built by Newport News for the Clark Hill Power Plant (see photo).

Shape of the curve is typical . . . not exceptional . . . for Newport News turbine performance. Regular, uniform, showing no-cut-off at full load, it indicates consistent delivery and stable operation.

And especially, experience in design and model testing.

At Newport News, turbine runners are continually being designed and redesigned for improvements in performance. And often upon receiving a contract for turbines, a model setting is built and complete tests made. So far, Newport News has filled turbine contracts with an aggregate rated output in excess of 7,000,000 horsepower.

Penstocks, spiral casings, valves, pumps, rack rails and other essentials are also designed and built at Newport News. Our illustrated booklet, "WATER POWER EQUIPMENT," will be sent to you upon request.

Engineers . . . Desirable positions available at Newport News for Designers and Engineers in many categories. Address inquiries to Employment Manager.

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"WHAT D'YOU SEE, MISTER?"

The future, son! New homes, new towns, new industry . . . in the Heartland of America!

* * *

The natural gas pipeline surveyor is a symbol of progress . . . of residential and industrial growth in that part of America's Heartland served by Columbia Gas System.

In Ohio, Pennsylvania, West Virginia, Kentucky, Virginia, Maryland, and southern New York, the demand for natural gas keeps mounting rapidly. Ten years ago, Columbia delivered 231 billion cubic feet of gas to the homes, businesses, and industries it serves. Last year, that figure rose to 605 billion. In 1961, it is estimated that the System's customers will require 845 billion cubic feet annually.

Columbia Gas System companies look to the future by planning and building to meet these increasing needs for natural gas . . . to keep pace with the phenomenal growth of America's Heartland.

COLUMBIA GAS SYSTEM

THE COLUMBIA *Gas* SYSTEM, INC.

COLUMBIA GAS SYSTEM SERVICE CORPORATION
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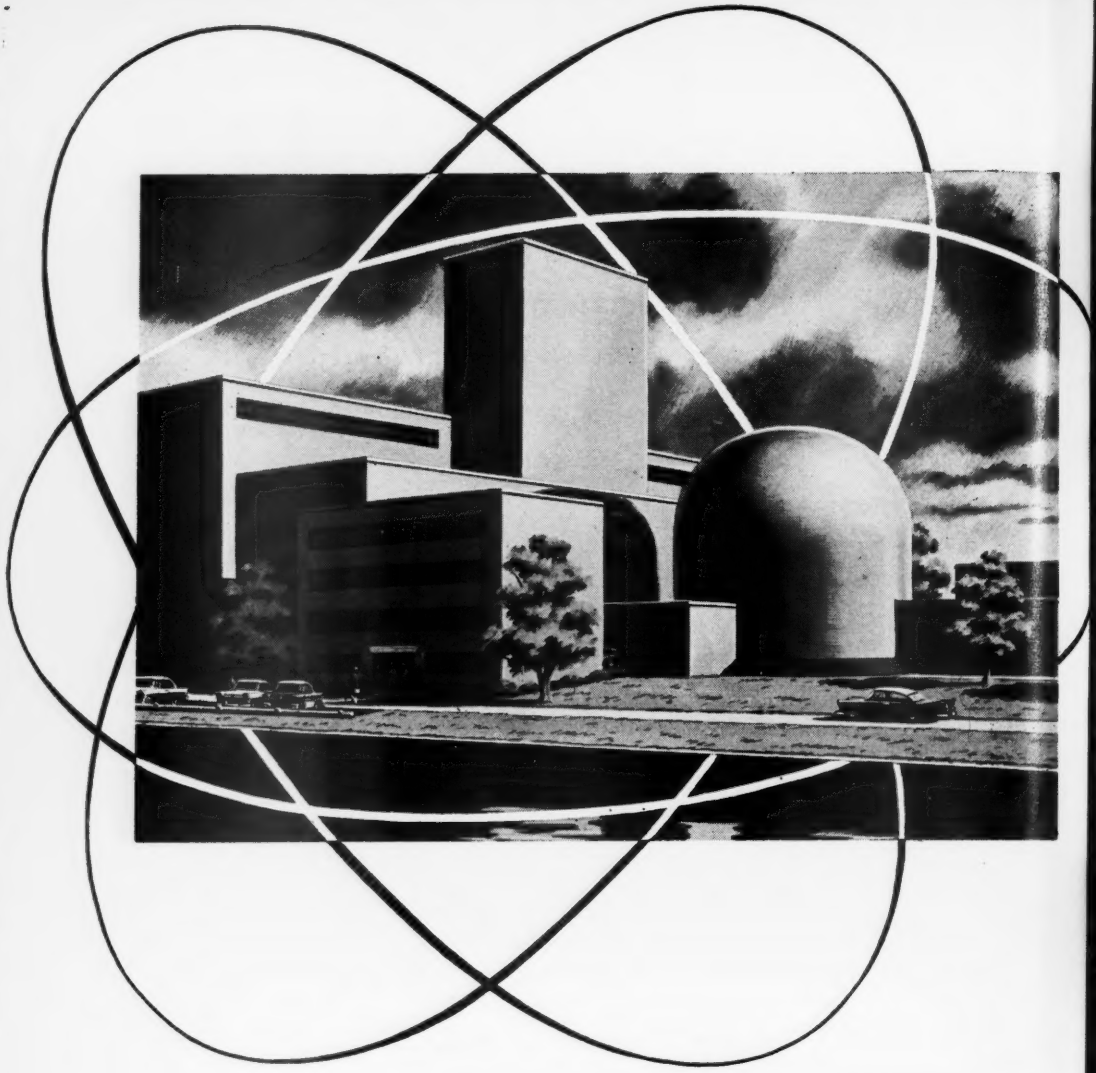
URGH GROUP: *The Manufacturers Light and Heat Company, Columbia Gas of New York, Inc., Cumberland and Allegheny Gas Company, Home Gas Company*



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OCTOBER—NOVEMBER

Thursday—24 *Virginia Independent Telephone Association begins annual convention, Roanoke, Va.*	**Friday—25** *Engineers Joint Council ends 2-day annual meeting and general assembly, New York, N. Y.*	**Saturday—26** *American Power Dispatchers Association, Inc., ends 2-day fall meeting, Fresno, Cal.*	**Sunday—27** *Alabama-Mississippi Telephone Association will hold annual convention, Birmingham, Ala. Nov. 11, 12.* ***Advance notice.***
Monday—28 *National Association of Railroad and Utilities Commissioners begins annual conference, Memphis, Tenn.*	**Tuesday—29** *American Institute of Electrical Engineers begins farm electrification conference, Minneapolis, Minn.*	**Wednesday—30** *American Water Works Association, Chesapeake Section, begins meeting, Washington, D. C.*	**Thursday—31** *American Nuclear Society ends 4-day winter meeting, New York, N. Y.*
NOVEMBER **Friday—1** *Institute of Radio Engineers ends 2-day annual technical conference of the professional group on electronic devices, Washington, D. C.*	**Saturday—2** *American Society for Metals begins world metallurgical congress, Chicago, Ill.*	**Sunday—3** *American Petroleum Institute will hold meeting, Chicago, Ill. Nov. 11-14.* ***Advance notice.***	**Monday—4** *South Carolina Independent Telephone Association begins annual convention, Clemson, S. C.*
Tuesday—5 *Federal Bar Association, Committee on Natural Resources, will hold a briefing conference on water resources, San Francisco, Cal. Nov. 14, 15.* ***Advance notice.***	**Wednesday—6** *American Water Works Association, Virginia Section, begins annual meeting, Roanoke, Va.*	**Thursday—7** *Pennsylvania Electric Association, Prime Movers Committee, begins meeting, Schenectady, N. Y.*	**Friday—8** *Edison Electric Institute, Accident Prevention Committee, ends 3-day meeting, Pittsburgh, Pa.*

Courtesy, General Telephone Company of California

Modern Telephone Office Building, Santa Monica, California

Public Utilities
FORTNIGHTLY

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Opportunity Unlimited—Independent Telephony

The 4,400 independent telephone companies are a "vibrant force in a dynamic economy." Why the author feels this way and his reasons therefor are authoritatively covered.

BY CLIVE W. HAAS*
FIRST VICE PRESIDENT, UNITED STATES INDEPENDENT TELEPHONE ASSOCIATION

As the nation's 4,400 independent telephone companies, their manufacturers, suppliers, and related firms unite to observe their sixtieth anniversary, it is appropriate that we pause to commemorate our past achievements, count our blessings, see how far we have come, and take a look at the foreseeable future.

Independent telephony has come a long way since its humble beginning as an organized industry back in 1897. As *The Wall Street Journal* recently said, the independent telephone industry is no minor league business. It operates 9.5 million telephones in 11,000 communities, and it serves two-thirds of the geographical area of the United States, as well as large areas in Alaska, Hawaii, Canada, and Puerto Rico. It has a plant investment

*Also manager, Big Timber Home Telephone Company. For additional personal note, see "Pages with the Editors."

approaching $2.5 billion, annual gross revenues of $650 million, and 100,000 employees. Seventy per cent of our telephones are dial operated, and hundreds are now being converted to dial operation.[1]

The independent telephone companies of this country have been responsible for many of the inventions that have contributed to the progress of the industry and the public interest, including development of the dial system,[2] which was first introduced by them at the turn of the century, the handset telephone, and direct dialing of long-distance calls.

WHILE the nation's long-distance service is furnished primarily by the Bell system toll networks, all long-distance facilities are interconnected with independent telephone company lines. Long-distance traffic between the two segments of the industry is freely interchanged. Agreements are in effect covering routings and divisions of revenues on the interchanged business. Many independent companies themselves own and operate a large mileage of toll lines, mostly regional in character, all interconnected with the Bell network and with the toll facilities of neighboring independent companies.

The independents are compensated by the Bell system for the use of their facilities in the interchange of toll messages. This toll compensation currently totals more than $160 million annually.

Although we are growing in every other way, the number of independent companies is shrinking gradually due to economic developments. Time was when a fairly creditable telephone plant could be operated successfully in a small community by a man and his wife. That day has passed, but through mergers, modernization, and other means, the independents are finding it possible not only to continue but to prosper. In fact, in terms of the percentage gain in number of subscribers, they are growing faster than the great Bell system. These mergers make for strength, but there continues a lot of sentimentality for the smaller units.

ALL this activity, however, received very little public attention until three years ago when the United States Independent Telephone Association, national trade organization of the industry, launched a country-wide advertising and publicity program to acquaint the public with the fact that, without the independents, the communications system of the United States would not be complete. This campaign has brought about a greater recognition of the importance of the independent segment of the industry, and has resulted in more interest on the part of investors in independent company securities, which have been issued in large amounts to meet the unprecedented need for money for plant expansion.

This greater recognition of the industry was given expression last month when Independent Telephone Week was celebrated nationally and when proclamations hailing the observance were issued by the governors of Alaska, Arkansas, Colorado, Florida, Illinois, Indiana, Kentucky, Louisiana, Maryland, Michigan, Minne-

[1] There are scores of important cities in which the independents operate exclusively, including Rochester, New York; Tampa, St. Petersburg, and Tallahassee, Florida; Santa Monica and Long Beach, California; Lincoln, Nebraska; Fort Wayne, Indiana; Durham, North Carolina; Jamestown, New York; and Erie and Oil City, Pennsylvania.

[2] The first practical telephone system was invented by Almon Brown Strowger, a Kansas City undertaker, whose basic idea materials were a pasteboard collar box, a lead pencil, and a packet of pins.

OPPORTUNITY UNLIMITED—INDEPENDENT TELEPHONY

¶ "BASED *on projections by the country's leading economists and statisticians, the independent telephone industry, now serving 9.5 million telephones, likely will be serving 12 million telephones by the end of 1960, and may have in operation some 26 million telephones by 1975. The Bell system, of course, will grow accordingly. This gives us something to think about. And it sets up a big target to shoot at, posing many problems, such as the raising of millions of dollars for capital expansion, training our people to keep abreast of technological advances, and keeping rates reasonably in line with inflation.*"

❦

sota, Missouri, Nebraska, Ohio, Oklahoma, Tennessee, Texas, Vermont, Virginia, Washington, and Wyoming. It is being given further expression again in this month of October with the holding of the highly publicized convention of the United States Independent Telephone Association at Chicago. Here more than 3,000 management and supervisory men and women will assemble to further their knowledge of the communications art, and circulate through some 150 display rooms of the Conrad Hilton Hotel to marvel at exhibits of equipment of various kinds, ranging from the latest in telephone switchboards to microwave and other electronic devices on down to crossarms, bolts, and nuts. The independents have their own equipment manufacturers and supplier agencies, the quality of whose products is as high as any in the world.

THE independent telephone business is, perhaps, one of the best organized businesses in the country, because the companies over the years have had brought home to them, time and again, the stark truth of the well-known aphorism that in union there is strength. Functioning at the national level is the United States Independent Telephone Association, while our interests at the local level are protected by 34 state telephone associations which co-operate closely with the national organization. In addition to looking after broad matters of common concern on legislative and governmental fronts, these organized groups are constantly studying the problems of the companies.

Through full-time staffs in most cases and voluntary committees, such subjects as accounting procedures, commercial practices, standardization, mechanization, employee relations, and public relations are constantly under review.

THEODORE ROOSEVELT once described the Chautauqua movement as the most democratic thing in America. If that be true, then it could be said that the independent telephone industry is the second most democratic institution in America. This is illustrated by its heterogeneous composition.

It is made up of 93 operating companies with annual gross revenues of more than $1 million each, and thousands of small companies scattered over the face of suburban and rural America, many of

which serve less than 1,000 telephones each and which have annual gross revenues of $50,000 or less. The equipment needs of these companies are filled by some 150 manufacturers and suppliers from various locations in the 48 states. Heads of large and small companies frequently have alternated in serving as president of the United States Independent Telephone Association, whose governing body of thirty-six directors is made up representatively of small, medium, and large operating and manufacturing companies. Personally, I know of no business which has better exemplified the American system of free enterprise than has independent telephony.

In the words of an observer, "the association is the outward expression in the field of national affairs of the abiding dedication of independent telephone people to a service touching intimately the lives of millions."

Today, our industry is a vibrant force in a dynamic economy. It stands, along with other industries, on the threshhold of a new era which seems destined to transcend all others. There are many who feel that in many phases of communications activity we have barely scratched the surface. No one can predict our future with positive certainty, but it looks as though we are going to grow and prosper during the next two or three decades as never before. Such a prediction, of course, is based on several premises, including the belief that there will be no violent misuse of atomic energy by world powers, and that we shall not experience a serious setback to our high-geared economy.

Looking back, we may be well pleased with the progress we have made, and even amazed at some of the rough terrain over which we have traveled, but looking ahead we still have a long way to go. We cannot afford to view the future with complacency because our business is highly competitive in the sense that other businesses are vying with us for the consumer's dollar. How far we move in the right direction, and how rapidly, depends on all of us and how well we explore the acres of ideas around us.

Based on projections by the country's leading economists and statisticians, the independent telephone industry, now serving 9.5 million telephones, likely will be serving 12 million telephones by the end of 1960, and may have in operation some 26 million telephones by 1975. The Bell system, of course, will grow accordingly.

This gives us something to think about. And it sets up a big target to shoot at, posing many problems, such as the raising of millions of dollars for capital expansion, training our people to keep abreast of technological advances, and keeping rates reasonably in line with inflation. The latter, in itself, is no small task as every telephone man well knows.

Our horizons are unlimited and the market potential is vast. We are no longer satisfied with simply meeting the demand for telephone service. We are looking forward to the more invigorating and challenging field of anticipating the customer's needs. More than that! We look forward to *creating* desires and being prepared to satisfy these desires at the right time and at the right price. In short, we are getting the merchandising concept. And that does not mean just selling—it is much broader than that. It means, first of

all, planning and all that planning implies: knowledge of the market and what is required to serve it. Next it means to translate market information into design and style procurement. And finally we offer the service—advertise, promote, and sell. As we develop and practice this philosophy we shall see the telephone develop beyond expectations.

IT would not be unrealistic to expect the elimination of four-party service in urban areas, fewer parties per line in rural areas, and a far greater percentage of families with telephone service than we now have. The home with one telephone will be old-fashioned. And it is not fantastic to expect a 150 per cent increase in the number of extensions. Farmers will have telephones in their barns. There will be a large increase in the number of colored telephones, and there will be a demand for special kinds of services not yet dreamed of.

Within the next ten years the use of radio in telephone communications will be commonly accepted. It will help us to keep in touch with planes, ships, and moving vehicles and to achieve increasingly a universal telephone service.

More distant perhaps is the possibility of telephones where you can see the party at the other end. This is already practical and has been demonstrated, but further study is required to determine if it can be produced at a cost which will have wide appeal. Other possibilities are a telephone with push-button keys to replace the dial, residential intercommunication set, door-answering telephone set, facsimile service, one-way radio signaling system, inward dialing to PBX extensions, and the integration of telephone systems with data handling and storage systems.

IN the kitchen of tomorrow there is to be a no hands telephone that lets the housewife carry on a local or long-distance chat while unwrapping the frozen dinner. This telephone could be answered by a touch of any one of a number of push buttons strategically located around the room. The same telephone system could also be used to activate equipment around the house, start meals, close windows, or let the cat out.

In short, there really is no saturation point, and we shall rely on the same spirit of enterprise that created our industry to keep alive the creative genius which will develop new uses, new markets, and an ever-increasing rôle for the telephone of the future.

For a successful performance of the gigantic task ahead, we shall need guidance and counsel as never before. Our national organization, the United States Independent Telephone Association, can be depended upon to smooth the way and help solve the maze of complicated problems which are bound to face us as time goes on.

From its vantage point in the nation's capital, aided and abetted by its dedicated people in the field, the association, through its officers and staff, will continue to give grand emphasis to the "forward look."

Relationship of State to Federal Regulation of Common Carriers

State commissions having jurisdiction over telephone and telegraph companies are primarily concerned with intrastate matters. There is a natural overlapping with federal regulation and this calls for a co-operative spirit in solving some of the joint problems.

By RULOM E. LARSEN*

Some of the more baffling problems which come before state regulatory bodies involve the relationship between state and federal regulation of common carriers. This relationship should be one of co-operation. Federal regulation has its place primarily in the regulation of interstate operations. State commissions have their place primarily in the regulation of intrastate operations. While the line of demarcation between intrastate and interstate seems to be variable for different utilities, it can usually be followed without too much difficulty if there is proper co-operation between state and federal agencies.

In many matters the federal government has pre-empted the field, and federal legislation or regulation takes precedence over state legislation or regulation. For example, the Federal Communications Commission has provided a uniform system of accounts and depreciation rates for telephone and telegraph service or, as they term them, "common carriers." They also require approval of construction programs. All this is considered essential to the authorization of interstate rate levels.

Now, obviously, with the uniform system of accounts prescribed for interstate business, it would be impractical to have a conflicting system and, consequently, another set of books for intra-

* Director of utilities, Idaho Public Utilities Commission. For additional personal note, see "Pages with the Editors."

state business. Accordingly, many of the states have approved the federal system of accounts for utilities within their jurisdiction, and sometimes have adopted additional, but nonconflicting, requirements.

The same is true as regards depreciation rates. Typical of the telephone industry, the same property is used indiscriminately for both interstate and intrastate service. Obviously, it would be impractical to have two different depreciation rates for the same class and kind of property, even for the same property, in some instances. The Federal Communications Commission considers the views of the states concerned before new depreciation rates are authorized, and thus the rates may be said to have been set on a cooperative basis.

Also, the federal commissions as well as many of the state agencies, require the submission of construction programs prior to the time work may be started. This is true whether the construction crosses state lines or is wholly within the state. Often the use of the property under construction will be for both intrastate and interstate service. Difficulties would certainly arise were the federal agency to approve construction and the state agency to decline to approve it. There would be delay from which the utilities and their customers might suffer.

SINCE the purpose of regulation is to aid in the provision of good, dependable utility service, regulation defeats its own ends when there is not uniformity in many of the matters in which there is joint regulatory responsibility.

With many overlapping areas, it is necessary that there be a great deal of cooperation between state and federal regulatory bodies and, in some instances, between the regulatory bodies of adjoining states. There is no need for these overlapping areas of authority to cause trouble. Rather, good, sound common sense would dictate that there be co-operation with a consequent saving in time and expense, not only to the utility and, therefore, its ratepayers, but also to the taxpayers of the several governmental groups.

There is need for co-operation and coordination in the treatment of accelerated depreciation by utility companies under the Revenue Act of 1954. Twenty-four state commissions, which have made accounting rulings, have provided for charging the differentials arising from the use of liberalized depreciation to operating income. Only one state commission, in a rate proceeding, has not recognized the differentials in such fashion. The Federal Power Commission has also held the differentials chargeable to operating income. Consideration is now being given the matter by the Federal Communications Commission, pursuant to the General Telephone Corporation's petition of September 25, 1956. The Wisconsin commission has filed an objection in this case.

THERE are two major types of telephone service. Briefly stated, one type is called exchange service and covers telephone calls within a community; the other type is called message toll telephone service and covers calls between communities or cities. Message toll telephone service contrasts with exchange service, largely, in the fact that it is nation-wide in scope, and the rates charged for the service are based, primarily, upon actual minutes of conversation and distance for each call; whereas, exchange service is confined

to local calling areas and is usually billed on a flat, monthly charge for unlimited usage. Toll calls originate in all exchanges of the nation—some large, some small, some Bell system exchanges, and some independent telephone company exchanges. Some toll calls originate in one state and terminate in another, while other calls are confined within state boundaries. Yet, all toll services are intimately bound together in a highly integrated network of telephone circuits and facilities.

Rates charged for message toll service, when passing from one state into another, are fixed by the Federal Communications Commission; whereas, the rates for toll messages within a state are subject to the jurisdiction of the regulatory commission in that particular state. Serious disparities in rates have arisen between those fixed for interstate service compared with those for calls within states. There is also a wide variation in rates in one state as compared with those of other states.

To illustrate some of the outstanding examples of dissimilarity in interstate rates compared to state rates, the initial station day rate from Seattle to Vancouver, Washington, is $1; whereas, the rate from Seattle to Portland, Oregon, seven miles further, directly across the Columbia river from Vancouver, is only 65 cents. The initial station day rate from Boise, Idaho, to Lewiston, Idaho, is $1.05; whereas, the rate from Boise to Clarkston, Washington, just across the state line from Lewiston, is only 75 cents. The initial station day rate from Phoenix to Yuma is 90 cents; whereas, the rate from Phoenix to Winterhaven, California, is 70 cents. Winterhaven is just across a river. In Idaho, you can call 174 miles for $1 intrastate and 316 miles for $1 interstate; in Arizona you can call 246 miles intrastate for $1 and 316 miles interstate for $1.

It is impossible to explain reasons for these differences in rates to the satisfaction of the public since, really, there is no logical or plausible explanation. The real reason, as you and I know, is due to the many separate and individual approaches to the toll rate structure under the various state and federal jurisdictions and the consequent impractical past attempts to allocate revenues and costs to these jurisdictions.

For a number of years application of

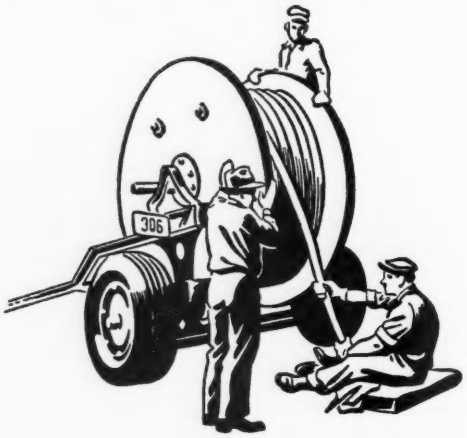
¶ "Some *of the more baffling problems which come before state regulatory bodies involve the relationship between state and federal regulation of common carriers. This relationship should be one of co-operation. Federal regulation has its place primarily in the regulation of interstate operations. State commissions have their place primarily in the regulation of intrastate operations. While the line of demarcation between intrastate and interstate seems to be variable for different utilities, it can usually be followed without too much difficulty if there is proper co-operation between state and federal agencies.*"

technical advances, such as carrier systems, coaxial cable, and microwave, have been more pronounced for long-haul traffic than for short-haul business. Also, the inflationary trend in costs during and following World War II had a greater impact on terminal costs than on line-haul costs, particularly since a large portion of the terminal costs are related to wages. The combination of these factors has had an extremely adverse effect on state operations where most of the toll traffic is short haul. It is generally recognized that, in spite of the fact that state rates average about 35 per cent above interstate rates, the earnings for intrastate toll operations, in most cases, are seriously below the return on investment for interstate operations.

This presents the practical problem to the state regulatory commissions of the possibility that the pressure of public opinion against increasing the differential would eventually result in the exchange rates carrying part of the toll rate requirements.

THERE has been quite an evolution in the history of toll rate making and in determining costs related to message toll service. Toll service makes use of all of the facilities used for exchange service—*i.e.*, the originating and terminating facilities—and, in addition, requires the use of toll operating and intercity facilities. Originally, it was the theory in the industry that the cost of toll service should exclude consideration for the use of any exchange facilities from the switchboard to, and including, the customer's telephone instrument, leaving only the switchboard and interexchange toll circuit facilities and the timing and ticketing of the calls to be assigned to toll service. This was the so-called board-to-board theory. This theory was later replaced by the station-to-station theory incorporated into Exhibit 2, FCC Docket No. 6328, which recognized the use of all telephone facilities for toll service from the subscriber's telephone, where the call was originated, to and including the telephone at the receiving end of the call. In 1947, a special co-operative committee on telephone regulatory problems of the National Association of Railroad and Utilities Commissioners and the Federal Communications Commission made numerous revisions in Exhibit 2 and reproduced it as the generally accepted Separations Manual.

IN the meantime, however, the earnings on interstate toll operations continued to increase while the earnings on state telephone operations steadily declined. In an effort to stem the ever-widening disparity in toll rates, agreement was reached between the NARUC and the FCC on a separations procedure that would transfer a considerable amount of state toll operating costs and investment to interstate. This was covered by the 1947 Separations Manual and the 1952 addendum, which is commonly referred to as the Charleston Plan. As the cost per toll circuit mile for the long-haul business continued to decline, the Charleston Plan was not sufficient to stem the disparity. In 1956, the NARUC and the FCC again reached agreement on the so-called Modified Phoenix Plan, which provided for the averaging of high-cost intrastate toll circuit mile usage with the low-cost interstate toll circuit mile usage. This procedure, covered by the 1956 addendum to the manual, transferred additional substantial amounts



Duties of Regulatory Commissioners

"THE duties of the commissions have been well described as 'Balancing the consumers' and investors' interests.' When conditions are changing rapidly, it is particularly important that the commissioners consider the past, but, more importantly, the future period when the rates will be effective. The consumers' interests obviously will be damaged quite as much by rates too low to enable the utility to improve and expand its service as by rates so high as to be unreasonable. The commissioner who maintains an even course in these circumstances will serve the public well, even though it may seem to him that neither side is satisfied with his decision."

of costs and investment from state to interstate operations.

AT this point, I would like to mention that the study procedures of the NARUC-FCC Separations Manual, and practically all other considerations and attempts by the state regulatory commissions and the Federal Communications Commission to resolve the disparity in toll rates, have been directed to Bell system operations. Message toll service is rendered nation-wide by the associated companies of the Bell system and the Long Lines Department of the American Telephone and Telegraph Company, as well as by some 4,400 independent telephone companies. The independent companies' share in the nation-wide toll business is considerably smaller in volume than that of the Bell system, but the independents serve two-thirds of the geographical area of the United States and originate and terminate toll calls in more communities than do the Bell companies. Any further consideration of the toll disparity problem must necessarily include all segments of the telephone industry.

THE division of message toll revenues is, therefore, a vital element in the toll rate disparity problem. At present, there are division-of-revenue agreements between the AT&T Company and the Bell associated companies for interstate toll revenues, which provide, in substance, that each company recover its full costs of handling interstate tolls, and that the remainder of the revenue be divided among the participating companies on the basis of net plant investment in such interstate toll business. The Bell associated companies then allow their independent connecting companies certain commissions and compensation, according to their individual contract agreements, which attempt to give independent companies about what they would receive from division of revenue, without the necessity for the complex studies required. However, operating conditions and expenses vary so widely among the independents that the toll business is sometimes subsidizing the local service, and, in some cases, the reverse is true. Furthermore, toll rate patterns are, in most cases, established for Bell system operations.

IT seems very appropriate that Mountain and Pacific state area commissioners seriously consider the message toll disparity problem at this time. The NARUC and the FCC have a working committee now actively engaged in making revisions in the Separations Manual. The question immediately arises, "What is needed in the revisions of the manual to solve, or at least alleviate, the disparity in toll rates, and to obtain more equitable distribution of revenues among the telephone companies?" It seems essential that any revisions, at this time, should be based upon current conditions, rather than preconceived concepts promulgated by the telephone industry. Also, establishment of longer-range objectives seems most important.

Thus far, the problem has defied the concerted efforts of the regulatory bodies and the telephone industry. Toll business in the United States has long ago become of age; it is no longer a supplement or adjunct to exchange service. It can well afford to pay its own way to the fullest extent, and it is rapidly increasing in volume.

FIRST of all, a realistic approach is needed that will apply sound separation procedures so that there will be no further need to accomplish transfers of costs and investment from intrastate to interstate operations by such means as the Charleston and Modified Phoenix plans. It is essential that fairer and more equitable procedures be developed for separations between exchange and toll services. The present procedure for separating exchange and toll costs is based largely upon "actual use and occupancy." Due to the difference in the nature of toll service compared to exchange service, and because of the restrictive toll rate structure from a usage standpoint contrasted with the rates for unlimited usage of exchange service, the "actual use and occupancy" formula does not allocate adequate costs to toll service with the modern development of broad band carrier equipment. Also, present procedures give only limited consideration to direct assignment of facilities required wholly or primarily for toll service such as 2-5 numbering plan, toll connecting trunks, and interstate dialing equipment.

VARIOUS plans have been considered from time to time to solve this problem; however, it appears to me that there is one that is simple, yet sound and reasonable, which need not materially alter existing regulatory jurisdictions. This plan would be to treat toll service nation-wide, as a whole, in a manner similar to that now employed for interstate traffic by the Bell system. A nation-wide toll rate schedule would be designed, regardless of intrastate or interstate business, adequate for the needs of the public and the telephone companies. This schedule might be determined by a joint committee of the NARUC and the FCC with the co-operation of the telephone industry, to be proposed for adoption by each state, as well as the FCC. No state would be required to adopt the uniform rate schedule, but would be limited in the participation of division of revenues to the amount produced by the application of the uniform rate. The division of revenues among the operating companies would then be made by first covering the full costs incurred, and the remainder would be divided in proportion to net telephone plant, similar to the division-of-revenue agreements now in force between the American Telephone and Telegraph Company and its associated companies for interstate traffic. The nation-wide toll rate schedule would be subject to adjustment only by review of the toll revenue requirements on a nation-wide basis by the joint NARUC-FCC committee.

UNDER this plan, all interested jurisdictions and all segments of the telephone industry would share equitably in the rate making and in the distribution of toll revenues. This plan would provide for the simplification of separation procedures. The only study requirements would be in the allocation of exchange plant and expenses to toll, thereby making it practical for the many small companies to participate on a division of revenue basis. It would require first of all, recognition by the state and federal jurisdictions and the telephone industry that it is impractical and not in the public interest to separate costs and investment between state toll and interstate toll operations. State and interstate toll business are intimately interwoven nation-wide, and, from an operating standpoint, such traffic differs only by length of haul. Toll rates must be designed, not only to produce revenues adequate to meet reasonable operating costs, but also must be designed to meet service requirements of the public, encourage use of the service, provide an equitable distribution of service and charges, permit economic operation, and maintain simplicity

¶ "THERE *is need for co-operation and co-ordination in the treatment of accelerated depreciation by utility companies under the Revenue Act of 1954. Twenty-four state commissions, which have made accounting rulings, have provided for charging the differentials arising from the use of liberalized depreciation to operating income. Only one state commission, in a rate proceeding, has not recognized the differentials in such fashion.*"

of administration and ease of understanding. Furthermore, there will be changes in toll costs, from time to time, that will not equally affect short- and long-haul operations.

THIS plan would require full co-operation of the state and federal regulatory agencies and the telephone industry. Under the circumstances, it is no longer logical or reasonable for each regulatory commission to tackle the disparity problem individually, as so often has been the case in the past, with the resulting inequality of treatment of the public and investors. In my opinion, the time is ripe for such co-operative action. For many years, the NARUC has been organized and has functioned to the immense benefit of the state commissions, and the co-operation received by this organization from the FCC in recent years in working out problems of mutual interest has been well demonstrated.

This plan would:

(1) Completely resolve the disparity in message toll telephone rates and gain substantial public and regulatory benefits.

(2) Cause intrastate toll operation to stand fully on its own without subsidization from exchange service revenues.

(3) Simplify and reduce the cost of accounting for toll service, which now requires separation between state and interstate operations.

(4) Place all segments of the telephone industry on an equal basis in participation in the nation-wide toll business.

IT appears to me that it behooves all of us to remember that the state regulatory bodies accomplish a great bulk of regulation. Further, the present federal administration seems to have the entirely reasonable view of entrusting to the states the regulatory function in all instances, except where federal supervision is absolutely required.

The number of state regulators who have been selected recently for appointment to federal regulatory positions demonstrates the increased recognition of the effectiveness of state regulation. The Mountain and Pacific area commissioners alone have seen five staff people leave to accept federal regulatory positions. I feel sure that the future is bright in this area of intermingling jurisdictions, apparent by the degree of co-operation evident today.

The responsibilities of state commissioners in this Mountain-Pacific area are particularly important, at this time, because the region is growing so fast, and conditions affecting the utilities are changing rapidly. The duties of the commissions have been well described as "Balancing the consumers' and investors' interests." When conditions are changing rapidly, it is particularly important that the commissioners consider the past, but, more importantly, the future period when the rates will be effective. The consumers' interests obviously will be damaged quite as much by rates too low to enable the utility to improve and expand its service as by rates so high as to be unreasonable. The commissioner who maintains an even course in these circumstances will serve the public well.

Telephone Companies That Earn Well, Serve Better

The matter of adequacy of earnings is one that confronts most, if not all, telephone companies, large and small. "When profits shrivel, service has to wither on the line."

By E. HORNSBY WASSON*
VICE PRESIDENT, AMERICAN TELEPHONE AND TELEGRAPH COMPANY

An observer of the telephone company, who is not an AT&T stockholder or employee, recently wrote an interesting comment to the management of the AT&T.

He noted that last year and in 1955 the Bell system had earned 6.8 per cent on its capital; and he said he had long wondered about the effect of "a consistently low return" on our business. How would it influence our decisions? And what will eventually happen, he asked, if we must be "overburdened with caution" in a society that demands venturesomeness?

He concluded by suggesting that the Bell system must show the public that at least in the long run, higher earnings will benefit the consumer — through better service, lower rates, or both. This proposition, he said, seemed to him entirely sound.

In my own judgment there are several reasons why the system today needs more adequate rates and a better margin of profit. But the main and overriding reason I believe is that good earnings will give telephone users the best and biggest value for their money.

* For additional personal note, see "Pages with the Editors."

Is it important that we bring this about? Who can doubt it? Our service is essential to the progress of the country. We are at work in a teeming, expanding economy. Population is growing, production increasing. Changes in our social and industrial organization come with great speed. The need for more communications —ever-improving communications — and new forms of communications—is evident at every hand. We not only can, we *must* make great contributions to the future. To make them as we should, we need earnings that will generate and sustain great energy and inspire the most progress.

In this article I shall first outline some of the immediate reasons why better earnings are required. Then I should like to discuss further the basic premise that good profits bring the greatest benefit to our customers.

As a beginning, let us look at the record over the past thirty-five years. Chart 1, page 648, shows the return on capital—the rate of earnings on the total capital invested in the business—for each year since 1922.

In the prosperous years of the 1920's, system earnings averaged nearly 8½ per cent on capital. In the 1930's, including the five worst years of depression, earnings averaged just under 5.8 per cent. In the war years they averaged 5½ per cent. In the first five years of the postwar period, they averaged 5.3 per cent. In the last six years they averaged 6.3 per cent, and in 1955 and 1956 they were 6.8 per cent.

So there has been a distinct improvement in the last year or two. It was necessary that there should be. In most of the postwar period—which has been the time of greatest economic expansion and general prosperity in the nation's history—our earnings were at well-nigh depression levels. Now they have come up, but you can see from Chart 1 that they have come up from a very low point.

Today it seems to me essential that we continue the improvement already begun. It is squarely up to us as managers of the Bell system to demonstrate to the ratepayers and regulators alike that good earnings are the lifeblood of the telephone industry.

This is all the more important because our industry is vital to the country's progress. We are not providing buggy whips or horsecars. We are providing fast, practically instantaneous communication services, and in our society these become more useful every day.

The very growth of our business shows this. Before the war, about 40 per cent of all households in Bell system territory had telephone service. Now nearly 80 per cent have it. Service in rural areas has vastly increased. Long-distance calling has quadrupled since 1940 and conversations over the longer distances have gone up over six times.

The operation of modern industry depends on fast communications and plenty of them. Telephone and teletypewriter services knit together the modern corporation — production lines, warehouses, sales offices, accounting, and all the rest. Dealers order by telephone and sell by telephone. Telephone dials control the flow of oil and gas and the distribution of electric power. Financial markets function by wire. Travelers get reservations

by telephone, florists sell flowers, dentists make appointments, and plumbers and roofers and painters get business.

Everybody wants the telephone. People on party lines want individual lines. Families are warming up to the idea of complete telephone service in the home. The public likes direct distance dialing and this will continue to make out-of-town calling even more convenient and attractive. Business is already starting to use Bell system facilities to transmit data between office machines, and new equipment now being developed at Bell Laboratories will make it possible for the machines to "talk" with each other at very high speeds.

Each year, too, the telephone system becomes more important in the nation's defense. Civil and military defense communication networks spread over the land. From outposts in the Arctic and from "Texas towers" at sea, signals travel instantly to centers which co-ordinate warnings and activate defense weapons. This is not yet complete—but it has begun and it is growing.

THERE is much more to come. Electronic switching is on the way, with the first experimental central office scheduled for trial in Morris, Illinois, in 1959. In the 1960's, electronic switching will grow rapidly, offering new forms of personal, "tailor-made" service to telephone users. New kinds of transmission systems will make it increasingly practical for people to see as well as talk with each other over any distance. And long before then, the flow of improvements will be making telephone service more useful and convenient in many other ways.

So it goes—or, I should say, goes *for-*

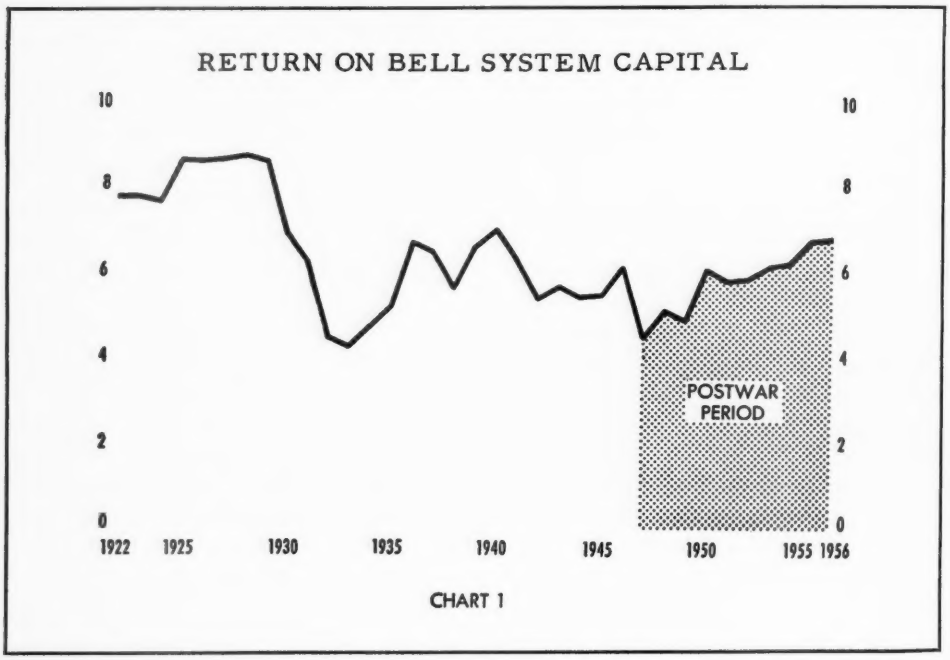


CHART 1

ward. All our experience shows that improvement of service brings increasing demand and use. As a striking example, look at the transatlantic telephone cable. Within a few months of its going into operation, conversations between this country and Great Britain about doubled. As one result, a second cable under the Atlantic to Europe is already being planned.

In addition to the increasing usage that comes with improvement of service, we can never forget the growth of this country. It is growing and growing fast—some three million people a year. As Mr. Kappel remarked at the annual meeting of AT&T share owners in April, it is as if we had a new city the size of Tulsa, Oklahoma, or Worcester, Massachusetts, every month.

So this is my first point: With an essential, ever-improving, more versatile and convenient service, in a fast-growing country, we have a tremendously important job to do—and do well.

How do we go about it? With men (and women, of course!)—with materials—and with money. A great deal of money.

In 1957, for example, we expect to invest about $1.6 billion of new capital in new plant—more than General Motors, Standard Oil of New Jersey, United States Steel, and Du Pont combined. We are having to obtain money from investors at an unprecedented rate, and to do our job as it should be done we must continue this in the years ahead. *Because our services are so needed and wanted,* we must carry out new financing on a larger scale than any business has ever before attempted.

So we need huge sums to build needed plant to provide needed service. But this in itself is no reason for investors to provide the money. The person with savings to invest is a free agent. He can do what he likes with his cash—put it in the savings bank, buy real estate, buy government bonds, buy annuities, buy stocks that he hopes will go up, and so on. Before he entrusts any of his savings to us, he will have to decide of his own free will that this is what he would rather do with those dollars than anything else. In short, we must compete with all other industry—I repeat, *all* industry—to attract from investors the money we need.

Through the years, we have been very successful in this. We have built up great confidence in the minds of many people. We have paid good dividends regularly for many, many years, through thick and thin. In addition, share owners have received rights to invest further in the business on favorable terms. People trust us. We have a good name and reputation. In consequence, investors have so far put into our business some $15 billion of their savings.

But now let us look at some of the conditions that exist today in this competition for investors' savings.

Chart 2, page 650, compares the Bell system's earnings on capital with the earnings of the 50 largest manufacturers in the country. The comparisons show how our earnings match up with theirs by ten-year periods over the past thirty years.

The point is not that in each period their rate of earnings is higher than ours. Our business is somewhat more stable (though our risks are increasing, as I shall bring out later). We would not ex-

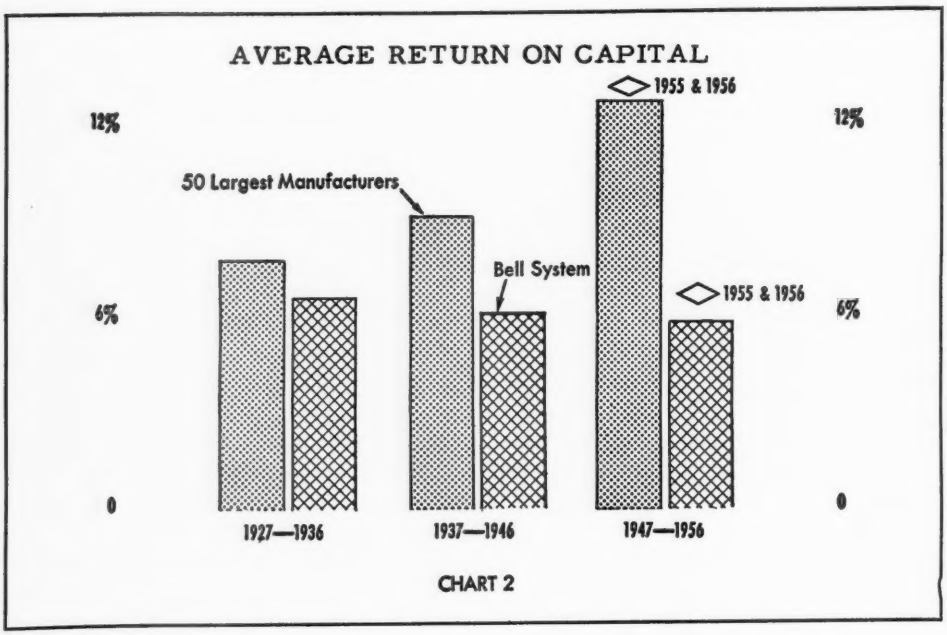


CHART 2

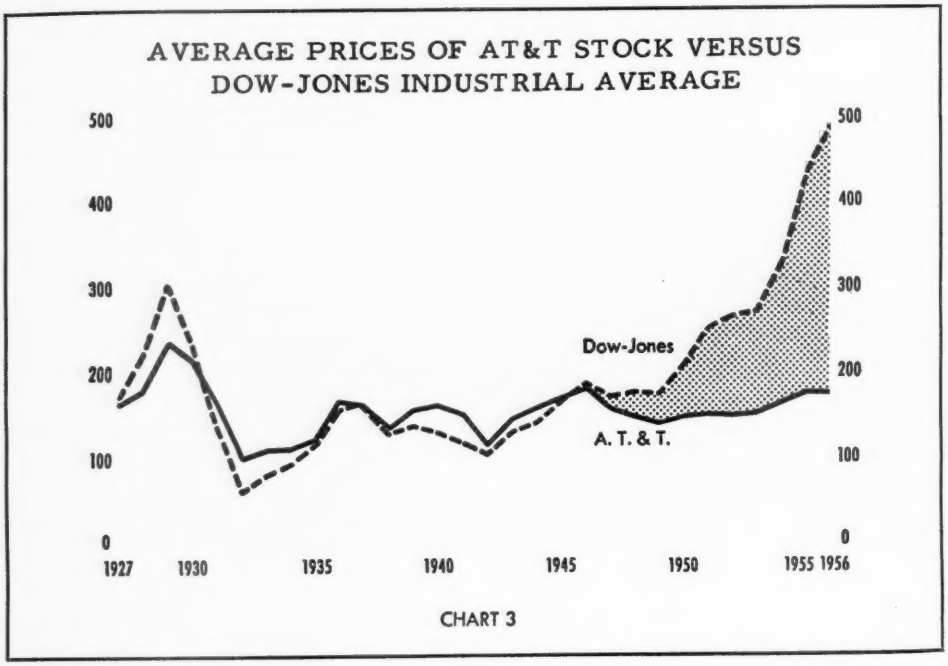


CHART 3

pect to earn quite as much as nonregulated manufacturing corporations.

The point is rather in the *increasing difference* between their rate of earnings and ours. The disparity has become tremendous in the postwar period. Their earnings reflect the prosperity of the times. Ours do not. Yet today we must raise more new capital than ever before, and compete with these prosperous companies, among others, to get it!

The "diamonds" above the 1947-56 bars show the returns for the two-year period 1955-56, when Bell system earnings, as mentioned earlier, improved to 6.8 per cent. Here our performance relative to the manufacturing companies is somewhat better. But the disparity is still far too great. How shall we have reasonable assurance that we can go on raising new capital in unprecedented amounts, unless we can show better comparative results? We are under public regulation because we do not have competition to the same degree that these other industries have it. But in attracting investors' savings, the competition is wide open; there is nothing that saves us from the necessity of going out into the market place to compete with everyone else.

NOR can we doubt that investors are well aware of the wide gap between our earnings and the earnings of others. They can see it reflected, for instance, in Chart 3, page 650. This compares the market price of AT&T stock over the past thirty years with the Dow-Jones industrial average. For a long time, the two curves approximately paralleled each other. In the postwar period, however, the picture is quite different. And many of our share owners have been asking, "When do we have a more reasonable part in national prosperity?"

This feeling has been increasingly expressed to us in recent years. One way of expressing it is in the question, "Why doesn't AT&T split its stock?" In fact, when a proposal to do this was presented at the 1957 annual meeting of AT&T share owners, quite a few people frankly said they hoped it would lead to an increased dividend. The board of directors recommended against the proposal, and made clear that a stock split would not increase the company's assets or the amount of earnings available for dividends. Accordingly, the share owners defeated the proposal. The fact remains, however, that underlying most suggestions for splitting the stock there is a strong sentiment for a higher return.

SUMMING up what I have said so far, it seems to me we have this kind of picture:

A job to do of great and growing importance.

Earnings that have only recently begun to move up from an extremely low level.

A much greater need for capital than any business has ever had before.

Stiff competition for capital from other industries that earn at a much higher rate than we do.

A strong current of feeling among share owners who tell us that this business is not participating in the general prosperity as it should.

THREE other points should be added here. I shall be brief but they are all important.

First, as everyone knows, money is tight and interest rates are up. It costs

much more to raise debt capital than it did two or three years ago. In fact, interest costs on Bell system bonds sold in the spring and summer of 1957 were substantially higher than at any time since 1930.

Second, Bell system operating costs continue to increase, mostly because of rising wages. Part of the rate increases the companies are asking for is needed just to keep earnings from slipping back below the current level. This makes it all the more important that action on rate requests be as prompt as the commissions in their good judgment can make it. Often in the past, when a commission proceeding has taken a long time, rises in costs after the proceeding began have made the rate increase insufficient when finally granted. In such a case, earnings never do catch up with the needs of the business. Today, under the circumstances I have already outlined, it is particularly important to reach sound decisions promptly.

THIRD, it is clear today that telephone users want many optional features of service. As a progressive business, we certainly wish to provide these, and we would not be up to our job if we failed to do so. But as we provide them, we are making additional investment that carries a greater risk. In a pinch, our customers would much more readily discontinue these services than, for example, their basic telephone service. The truth is that these optional features are pretty much competitive with the products and services of other industry—with electric appliances or tulip bulbs or aluminum screens or whatever else the customer chooses to spend his money on. In providing them, we take our competitive chances and we should be allowed to earn accordingly. Remember that regulation is a *substitute* for competition. Where competition exists, and to the extent that it exists, the pure logic of the matter is that the competition itself should determine prices and earnings. If, instead of this, we are limited by regulation to earnings on *total* investment that do not compensate for greater risk in *part* of the investment, then we shall be in the very difficult position of not being able to give the public what it manifestly wants.

THAT whole paragraph boils down to this: The degree of risk in our business is increasing. Our ability to continue to meet all of the public's expectations depends on the commissions giving full recognition to this.

¶ "OUR *service is essential to the progress of the country. We are at work in a teeming, expanding economy. Population is growing, production increasing. Changes in our social and industrial organization come with great speed. The need for more communications—ever-improving communications—and new forms of communications—is evident at every hand. We not only can, we* MUST *make great contributions to the future. To make them as we should, we need earnings that will generate and sustain great energy and inspire the most progress.*"

Now let me repeat the main thought that was stated on the first page. How shall we show *that in the long run, better earnings will benefit the consumer?*

The introduction of improvements which carry more risk is of course one illustration. Good earnings encourage this, meager earnings do not. And we ought to bear in mind that people in this country are looking more and more for better things. Less and less do they want the minimum bare-bones product — the cheapest package or the skeleton service at the very lowest price. Increasingly they want the coat with the quality lining, the waterproof wrist watch, the car with the white side wall tires. If you have any doubt about this, I checked the other day and learned that last year the tire makers turned out about 35 million white side walls—and at a good profit, you may be sure.

How shall *we* respond to people's wishes? With boldness and imagination? Or shall we be "overburdened with caution," as my letter-writing friend expressed it? This will pretty much depend on how well we earn. In fact, our financial results will profoundly affect not only the kind of thing I have just been talking about, but every aspect of our service to the public.

The great thing about good earnings in any business is that they improve your opportunity to use good judgment and act on it. Skimpy earnings make it necessary to cut your cloth to the needs of the moment. This may often mean having to do the thing that is expensive in the long run.

Let's consider a few examples.

We know that over and over again in our business, we must make intelligent decisions in building our plant. We know that over a period of years, it is not economical to underbuild—to put in plant piecemeal.

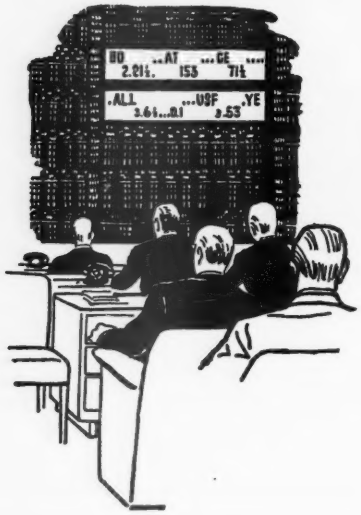
Building just what is needed at the moment, then putting in additions soon after, is expensive. The dollar outlay may be held down today, but in the end the unit costs go up. Engineering work must be repeated. If a building must be added to, the addition costs more per cubic foot. Two small cables cost more than one that is twice the size. The crews go out twice instead of once. All along the line, piecemeal building costs more.

But to build economically costs more at the start. It *requires* that the company be in A-1 shape financially—that it can readily get all the capital needed—and that it can afford to carry the larger initial investment.

We know, too, that an ounce of prevention is worth a pound of cure. Shall we spend money for preventive maintenance? Shall we shut off troubles before they happen? Or shall we let the future take care of itself (because we have to be cautious about current expense) and then later find ourselves spending ten times as much to fix up things that went bad?

We have certain ways of going about our work—certain methods and procedures. Shall we say (because we are cautious about expenses) that these methods will have to suffice? Or shall we spend money now to pay able people to work to improve them—so that in the long run our procedures will be more and more economical?

Training people costs money. If earnings are low, and we have to strain to



Faith in the Future

". . . we have consistently acted on the FAITH *that our need for improved earnings would be recognized; and our long-term earnings performance, going back to the prosperity of many years ago, has had a profound influence in persuading our share owners, now 1.5 million strong, to maintain their faith in us. But the prosperity of the past goes farther back into history each year. We greatly need an equal share in the prosperity of* TODAY *to make sure that we can keep the faith of investors through the years ahead."*

make as good a financial showing this year as we can, shall we be overly cautious about how much we spend to train employees in their jobs? Who would say yes to that?

These are not theoretical questions. These are practical realities that we must deal with every day. Telephone people know them for such. *Only* good earnings give the freedom to do what ought to be done in the consumer's interest—the well-thought-out, imaginative, look-ahead job. The economical job. The right job.

Now I think I can hear a friendly comment on what I have written. Perhaps it goes something like this:

> All very well—but isn't it true that the Bell system has done a pretty effective job in these postwar years? You *have* succeeded in raising billions of dollars of new capital. You *have* generally met the greatest demand for telephone service in history. You *have* carried on research, modernized equipment, and improved the service so that it is better today than it ever was before. And you have done all these things on what you have actually earned. Why, then, is it desirable that the level of earnings be raised?

I would say in reply:

First, it is beyond dispute that we have made good progress.

Second, I am convinced this progress would have come faster, and gone farther, if earnings had been better.

Third, this same comment that I have hypothetically quoted above might just as easily have been made a few years ago, when our earnings were even lower than they are today. But as sure as I am writing these lines, if we had not then pressed

on the commissions our need for better earnings, and they had not acted, the comment could never be made today.

Fourth, we have consistently acted on the *faith* that our need for improved earnings would be recognized; and our long-term earnings performance, going back to the prosperity of many years ago, has had a profound influence in persuading our share owners, now 1.5 million strong, to maintain their faith in us. But the prosperity of the past goes farther back into history each year. We greatly need an equal share in the prosperity of *today* to make sure that we can keep the faith of investors through the years ahead.

Fifth, as I have mentioned, there is more expressed sentiment today on the part of AT&T share owners that they deserve an increased return than was ever voiced in the past.

Sixth, as I have also mentioned, we must obtain more new capital today than ever before, and to get it we must successfully compete with other companies which today earn far more than we do.

Seventh, the over-all rate of earnings of the Bell system is the composite of many different rates of earnings in the various states. In some of these the earnings are still woefully low—so low as to virtually block progress.

FINALLY, the type of comment I have quoted seems to me to come out of the habit of thinking in the past. How much imagination is there in it? Is there any at all? I deeply believe that with better earnings we can bring about far more in the way of better service than is dreamed of in this philosophy.

WHAT we in this business do, and the way we do it, is vital to the country's economy and to its progress. Our financial good health directly affects the well-being of millions: 1.5 million share owners, nearly 800,000 employees, tens of thousands of other businesses that supply materials and services to us, their employees, every community where we pay taxes and telephone people spend wages. But above all, it is our *service* that counts, and will count even more in the years ahead. Our job helps every other job. And the better our job, the more we can help the progress of others and the progress of the nation. Conversely, for the telephone industry to become a *problem industry* is unthinkable.

We can surely do much, much more for everyone we serve than we are able to do today. *This* is the reason—and it is the only possible sound reason—for seeking telephone rates that will afford a better margin of profit. As we lay our needs before the various commissions, in the final analysis we are asking them to act on their faith in us—in our competence, our energy, and our sense of public responsibility.

"THE government no longer believes free men can manage their own affairs. . . . [present-day government] takes your money away from you on the presumption that a handful of men can spend the proceeds of your toil and labor to greater advantage than you who created the money."

—DOUGLAS MACARTHUR,
Chairman of the board, Sperry Rand Corporation.

Bedrooms Can Add 70 Million Telephones

Merchandising color phones and other communications aids is the application of certain principles long used elsewhere which can be adapted to phone company use. Independent telephone and the Bell system companies have found this path.

By JAMES H. COLLINS*

TIME certainly flies in this postwar age—jet. It is hard to realize that only three years ago the telephone industry burst into color, and my friend Chet Gibson said, apologetically, "You know, I've fallen for one of these new color phones. We did over our living room. The black phone looked like a coffin in the parlor. So I ordered an ivory set. Costs extra! But it matches. We like it."

As I remember, two-tone sets had not yet been announced. The Gibson family's monthly phone bill, about $6.50, minus toll calls, was not raised.

Since then, the telephone commercial men have been busy in that home, turning it into a plant-for-living comparable to an office setup for working.

THE Gibsons live in an eight-room suburban house—husband, wife, two children, a boy and a girl, approaching high school age. They have no servant living in. The youngsters have their own rooms, Mrs. Gibson her sitting room, and Chet a basement workshop, which is also a play room.

The telephone men made a family count, and upon it based suggestions. The extensive phone affairs of the two young-

* Professional writer, resident in Washington, D. C. For additional personal note, see "Pages with the Editors."

sters were taken out of the living room with an extension outside their bedrooms, Mrs. Gibson got an extension in her sitting room, and Chet a portable set that plugs into his bedroom, workshop, or the barbecue patio. All color, all spring cords, and with intercom push buttons. Recently he ordered a wall set in the kitchen.

"Mary would be getting dinner, broiling a steak. The living room phone would ring. It was only twenty steps away, but she had to rush for it, would get tied up in the call, and the steak would burn. That wall set by the range pays for itself every month in $4 steaks."

The Gibson's monthly phone bill has about doubled, but its convenience of living has more than offset that. Chet is an $8,000 man. The commercial men will sell him more equipment and service. Perhaps a separate trunk for the kids' phone. Perhaps a "no hands" speaker phone.

For about fifteen years phone companies had nothing to sell, but were struggling with huge backlogs of waiting customers. New cables had to be laid to reach them, and even black sets were scarce. But all that time the research laboratories and engineers were contriving new types of phones and service, and finally, in 1954, there was something to promote and sell. That was color sets, and they took the public by storm, because color is something that has had an instant appeal in cars, clothes, appliances, decorations. Making a start with such new equipment as illuminated dials, volume control, hands-off phones, and answering sets would have involved complicated explanation. But color was something that everybody understood, fitted into the living room décor, and wanted.

Somebody has said that Bell always has had color phones—if so, they were one of the best-kept secrets.

Color was started off with a powerful sales gimmick. The installer coming to put in the phone that the family had been waiting for for months, carried a color set along with the familiar black one. The way people *fell* for color, as Chet Gibson puts it, astonished the commercial men.

Today, being without color phones is as much a stigma as being without a college degree. There is a story about the White House staff, dismayed, discovering that in Mamie's bedroom a blue phone was setting up a dissonance with a brown push button. That called for quick action.

The other day, the commercial department in one city discovered that it had run short of black sets for business installation, but that there were plenty of color phones. What to do? They put on a campaign promoting color sets in offices, and restored the balance.

When color came, simple reds, blues, and greens were offered. Then commercial departments added imaginative names, like horizon blue, moss green, and now standard Ostwald system names are being adopted: medium blue, cherry red, Oxford gray, sage green. These names are used by decorators. The system was named for Nobel prize winner Dr. Wilhelm Ostwald.

Will the discovery of merchandising by the commercial men ever rate a Nobel prize, like transistors?

Probably not, but to them it is a discovery outweighing the marvels coming out of the scientific research laboratories, and their excitement over it, their visions of the future, are touching to those who

have followed merchandising progress in other lines of business. The production-minded telephone industry finds that certain principles long utilized elsewhere, will work for it. It is all new and wonderful. Like the Irishman with beginner's luck at the race track, it asks, "How long has this been going on?"

FOR instance, the building business. Many years ago a woman bought a tract house, and the builder gave her a key, and asked her to show other houses, which she did, until she got tired of it, and took the key back.

"I was going to pay you a commission if you sold one of my houses," said the builder.

"Give me that key!" she snapped, and began selling his houses by a woman's merchandising. She had observed in showing visitors around that they were generally interested in a single feature, like the bathroom. "Bathrooms sell houses" she told the builder, and on her advice he spent money on tiled walls and nickeled plumbing. Later on it was kitchens that sold the house, and then appliances.

The merchandising principle is that people have dreams of homes, cars, careers, travel. But they do not always have the imagination or knowledge of new things to flesh out their dreams. Show houses help get the dream boats down to the water.

LAST year Chesapeake & Potomac telephone engineers were asked to install the telephone system in a "House of Ideas" built in the Washington area by *House and Garden.* This magazine builds such a house every year, in a different part of the country.

The engineers put in everything available, including the wall set at the kitchen stove from which the Fuller brush man could be dismissed at the front or back door—as was possible from other phones throughout the house. Children had their own phones in their rooms, on their own trunks. There were illuminated dials, and various kinds of phone bells and buzzers, visible call signals, intercom push buttons, answering phones, speaker phones, and an installation in the nursery that monitored sounds to any phone.

More than 100,000 visitors went through this house, and the phone setup was ordered in toto for other houses being built, while thousands of viewers adopted features that appealed to them.

One of the most impressive features was not found in the equipment or service, but in the monthly phone bill. The total service charges came to about $80 a month. This was a home for an upper bracket income family, and the phone in-

¶ *"IN Bell market studies it has been found that the largest number of home subscribers want spring cords. After that they want color. There is a potential demand for about 10 million more color phones, and the installer coming up the front steps with a black set in one hand and a gray in the other, is going to be welcomed by interested customers as far as it is possible to see into the future."*

stallation was simply in keeping with other features.

TELEPHONE companies are setting up various kinds of exhibits in connection with their merchandising programs. At central offices different types of equipment are shown in permanent exhibits, and inspected by visitors who are building homes, or who are interested through local advertising. Information clerks explain the various features of different equipment and services, and orders are often given then and there. If further assistance is needed, a salesman goes to the visitor's house.

Some telephone companies have set up exhibits in supermarkets, and shoppers cannot only see the various kinds of phones, but take one home and have it installed by leaving their names and addresses.

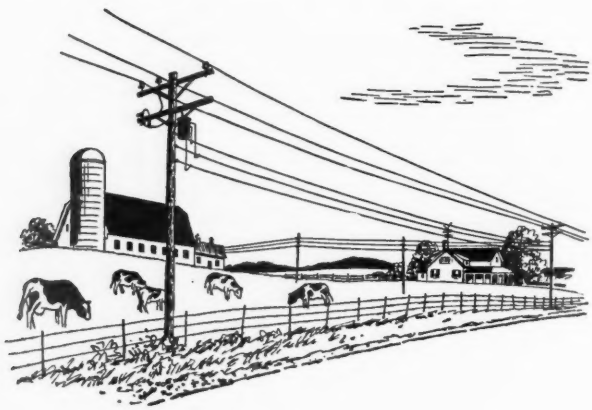
These are static promotions. Animation enters in when phone installations are made in builders' show houses, in actual operation. Such installations can be carried to the fantastic, like electrical setups. One builder, giving the power company a free hand, found his exhibition house equipped with $10,000 worth of electrical appliances, lighting, push-button, and other late gimmicks, including electronic safety devices outdoors. Entertaining a crowd of friends at a preview, he stepped outside through a French window and suddenly found himself in custody. He had walked through a beam, and alerted a police prowl car.

That is the kind of show the public loves, drawing throngs, giving live concepts of convenience in the home.

Market research is the basis of good merchandising, and was started by Bell with the launching of color. Home subscribers' present phone uses and future needs were surveyed in New Jersey and Nevada as typical of the nation. Upon the market information obtained, regional Bell companies have based local merchandising policies. Bell information has been available to independent phone companies.

Today, the single phone in the living room is standard for the home. It may have been converted into color, but only 20 per cent of American homes have two phones, and but a fraction have three or more. There are at least 70 million bedrooms, a natural market for the merchandisers, and first line of attack in merchandising. Bell is designing a special bedroom set to harmonize with the décor, and research makes it possible to forecast the color most likely to sell. Already it has been learned, through sales figures, that color choice goes by rooms. In the living room, people like grays and greens. In the kitchen, they select reds, yellows, or whites, to match appliances. And in the quiet of the bedroom they prefer pastel shades. The bedroom phone of tomorrow is most likely to be a rose pink.

IN Bell market studies it has been found that the largest number of home subscribers want spring cords. After that they want color. There is a potential demand for about 10 million more color phones, and the installer coming up the front steps with a black set in one hand and a gray in the other, is going to be welcomed by interested customers as far as it is possible to see into the future. He has a dozen other things with which to utilize the "associated selling" tactics in retailing, where a toothbrush sale suggests dentifrice.



Farm Intercommunications

"WHAT the farmer needs, and can afford, is an extension in the barn, and other outlying places where he works, so that his wife can flip a switch and say, 'Jim, this call is for you.' For the first time, telephone merchandisers are offering him such conveniences. The old farm bell can be replaced with a loud phone bell, or a loud-speaker. In the home, a phone pick-up that permits listening in on the nursery is a great convenience. . . . On twelve Iowa farms a Bell company made trial installations along these lines, the farm families keeping records of the conveniences most used. At the end of nine months the farmers said that barn extensions were best for them, and the farm wives liked an extension in the house."

"You'll want this gray phone with a spring cord," he says. "How about an extension phone in the bedroom?" There is a large waiting market for volume control that gives privacy, illuminated dials, various choices in bells and visible phone signals, and the "upgrading" of party-line subscribers to private trunks. Also in growing demand, certain to be more popular when better known, are the "no hands" speaker sets, and even answering sets in certain homes. There is a surprising demand for additional directory listings in the home, wives paying for separate listing by maiden names or organization activities, and various members of the family by first names.

AT war's end less than half of American homes (47 per cent) had Bell system phones. This has risen to 72 per cent today, and by 1965 should reach 83 per cent, about 62 million homes. Add independent phones, about 9 million more, a ratio of one in seven of the total, and an immense market for additional service in

homes is seen. The public is learning that much of the convenience of telephones in business is available and economical for the home.

WHEN color and merchandising were new, the commercial fellows got a sort of *mea culpa* complex, reproaching one another for being too production minded. The telephone business had grown to its present magnitude, they confessed, almost in spite of them. The time had come for a changed attitude, for aggressive promotion, for getting out there and selling.

"We must learn to merchandise like fellows in other lines of business, compete for our share of the consumer dollar."

"You're absolutely right—but what is our share?" somebody asked.

"Why—well I guess we'll have to make a survey to find out."

Even with three years of merchandising experience this attitude has changed. They have discovered that the telephone business is still production minded, always will be, and that a great deal of the engineering research that has been done over the years is also good market research.

They have discovered that the consumer dollar cannot be shared, because there isn't any consumer dollar. It is an economist's dummy, like the average consumer.

To illustrate:

Once, California had more oranges than it could find markets for. Our national consumption of oranges then was a half orange for breakfast when there was no other fruit. The pulp was dug out with a spoon, some of the juice spurted in the eye, and the California orange growers, far from the big consuming markets, needed a promotion gimmick comparable to color sets.

They got one. Some bright young fellows in their marketing association argued, "Why eat your orange—why not drink it?" And almost at that moment Vitamin C was discovered and popularized in California orange advertising.

TODAY, to forget your daily orange juice, frozen, canned, or fresh, is what forgetting to say your prayers was in that day. The national per capita consumption of oranges is measured in crates.

What share of what consumer dollar was taken to pay for all these oranges?

Not a cent, of course. It would puzzle the crowned heads of Europe to point out any share of anybody else's dollar that has been taken for color phones, extensions, or the new telephone merchandise generally. The power and gas companies have lost nothing.

The American consumer is always able to find another dollar for anything he wants. Our whole economy is built on the elasticity of his buck. Going back over the things he has acquired in the past, from cars to television, it is hard to find anybody's dollar shrinking. Flour, potatoes, and lard have lost consumption, but the total food budget has increased out of all bounds. The consumer dollar has stretched to the point where today the economists are of two minds about it. One school holds that it has reached the limit, and another that there is no limit in sight. No economist knows.

SO, in telephone merchandising it was soon seen that selling is something like judo. In judo, the opponent's own strength is utilized to bring him down. In

merchandising, the consumer's desire is utilized by showing him something he will want. The installer carrying a color phone into the house along with a black one was, from the start, right on the merchandising beam.

MERCHANDISING is directed to increased revenue. Regulated industries are granted increased rates only after long proceedings, and the increases are often to a large extent absorbed by rising costs and taxes. A regulated business cannot easily offset rising costs by obtaining increased rates. Such increases are almost immediately absorbed by further cost rises. But if more service can be sold, the business is brought into better balance.

This is what merchandising does, and its results are therefore reported in terms of added revenue.

One Bell company put on a three months' campaign to sell speaker sets alone, using seventy college graduates. More than 26,000 contacts were made, and 4,293 sets placed, where none had been used before. The campaign added $257,000 yearly revenue.

In another campaign 29 company sales people sold color sets, extensions, speaker and answering sets, extra directory listings—the works. In three months 20,000 contacts were made, 7,000 sales, adding up to $130,000 yearly revenue. Sales costs in such campaigns are comparable with those in other lines, averaging about 10 per cent.

RESEARCH for telephone merchandising, something entirely new in the business, turns out to be quite complex, and not so very new. The recently appointed merchandise executives have found that accounting, production, and laboratories have been laying the foundations for many years.

Telephone growth has always been community growth. Whether the new subscriber orders a black set in the living room, or a half-dozen extensions with color sets, there must be a trunk into a central station. That central station must be planned and built ahead, against the day when it will be needed, and thus community growth must be forecast.

Merchandising research starts with the growth figures.

Yesterday, a branch factory coming into a rural community, or a housing development in a suburb, meant future demand for residence and business phones. Today, with new subscriber equipment, such demand is multiplied. The merchandising managers use the accounting and production data to gauge their sales possibilities, and they are proving ample.

¶ *"WHILE Bell has the largest organization for research, and large regional companies to utilize market information, the non-Bell companies are as alert in merchandising. Their manufacturing companies had color sets as soon as Bell announced them, and also have practically all the special equipment used in merchandising, such as speaker phones, answering and recording devices, spring cords, illuminated dials, loud-speaking, volume control, and like improvements."*

What the merchandisers have to sell is convenience in the home, and cost cutting and increased revenue in business.

They really sell the consumer *time*. He can always find another dollar, but his hours have to be shared, and there are not enough of them in the day, what with increased leisure and multiplying home activities, social affairs, and recreation. The family count, used as the basis for home installations, figures steps and minutes to be saved by improved phone equipment.

ONE of the most interesting markets for merchandising, it has been found, is the farm, and there is a farmer's wife story, told by commercial men who made a rural merchandising survey in five midwestern states, with nearly 90,000 farms. The farm phone would ring, and a voice asked, "Can I talk with Jim?" The farmer's wife would say, "Just a minute," and turn on her husband's electric razor, letting it run twice for a few seconds, and then pick up the phone again, saying "Jim'll be right here."

The farmer was milking in the barn, listening to a radio program. Interference by his electric razor created a blur in the program. One blur meant that dinner was ready, two blurs that he was wanted on the phone, and so on by a code worked out for this home-made communications system.

What the farmer needs, and can afford, is an extension in the barn, and other outlying places where he works, so that his wife can flip a switch and say, "Jim, this call is for you." For the first time, telephone merchandisers are offering him such conveniences. The old farm bell can be replaced with a loud phone bell, or a loudspeaker. In the home, a phone pickup that permits listening in on the nursery is a great convenience. On the farm, such a pickup in the hog house is a convenience, echoing significant squeals at farrowing time.

ON twelve Iowa farms a Bell company made trial installations along these lines, the farm families keeping records of the conveniences most used. At the end of nine months the farmers said that barn extensions were best for them, and the farm wives liked an extension in the house. This test provided data to guide advertising and merchandising, and also for designing special farm phone equipment. The merchandise men, talking the lingo of their new promotion activities, spoke about a "farm package."

The farmer is an interested customer for upgrading, from party lines to a trunk of his own, or sometimes a two-party line on which he is the sole subscriber. Many farms are on party lines with as many as eight subscribers, but there is a definite trend toward private lines. In this Iowa farm test there arose a question as to how extensions might complicate traffic over the line. It was found that, if anything, extensions tended to take traffic off the party lines.

Only one farmer in four had a phone fifteen years ago. Today more than half the nation's 5 million farms have phones, and in this 5-state area where the survey was conducted, 84 per cent of the farms have phones. The farmer is both a residence subscriber and a businessman, and needs something like a push-button switchboard in the house, operated by members of his family.

As the installer carries a color phone along with a black one, so in mer-

New Telephone Exhibits

"TELEPHONE *companies are setting up various kinds of exhibits in connection with their merchandising programs. At central offices different types of equipment are shown in permanent exhibits, and inspected by visitors who are building homes, or who are interested through local advertising. Information clerks explain the various features of different equipment and services, and orders are often given then and there. If further assistance is needed, a salesman goes to the visitor's house. Some telephone companies have set up exhibits in supermarkets, and shoppers cannot only see the various kinds of phones, but take one home and have it installed by leaving their names and addresses.*"

chandising new business there are productive gimmicks.

THE answering and recording set, for example, has great possibilities for doctors, dentists, pharmacists, stockbrokers—practically every other type of business, including the telephone business itself. It is as yet almost unknown, its sales last year numbered in thousands, where it can be a sales and profit device for hundreds of thousands.

The gimmick is an answering set carried around by a salesman, plugged into any electrical outlet, and put at the service of the prospective customer, to speak a message and hear it played back. This is a device so versatile that each subscriber finds uses for it.

The mayor of a town where citizens are still able to call him personally put an answering-recording set in his office, allowing him to work uninterruptedly at his desk, the set telling citizens that he would be glad to hear their recorded messages and attend to them a little later. This enabled him to concentrate on paper work, and also concentrate all his phone calls, cleaning them up in a half-hour.

In a similar town, the chief of police

is on office duty nights, and from time to time goes out patrolling. The answering set takes his calls.

For the stockbroker it is a customer's man, ready with the latest market quotations on plugging in a phone number. A large brokerage company will have a dozen or more sets in different offices over the country, available by dialing a special number. Far from resenting impersonal service, customers like it.

THIS device can be personal, as when a pharmacist takes doctors' prescriptions, or impersonal, as when a theater answers phone calls about show hours, or a newspaper gives out information about fishing, weather, highways. Telephone companies use it to give out miscellaneous information the public wants by dialing a number, often charging a message unit. Measured in clerk time, monthly wages for one girl will pay the service charges on several of these sets.

Almost every type of business requires its own kinds of phone service, and Bell is presently conducting national studies in retail stores, banks, railroads, hotels, manufacturing, service businesses. Some of these studies are being carried out by AT&T, others by regional companies. About forty of them are under way, to develop marketing information that will help sell, and also for the designing of special equipment.

WHILE Bell has the largest organization for research, and large regional companies to utilize market information, the non-Bell companies are as alert in merchandising. Their manufacturing companies had color sets as soon as Bell announced them, and also have practically all the special equipment used in merchandising, such as speaker phones, answering and recording devices, spring cords, illuminated dials, loud-speaking, volume control, and like improvements.

Recently, the United States Independent Telephone Association formed a merchandising committee, for market research, and its first activity was a joint session with the Bell system's merchandising department, to exchange information. There are 4,700 non-Bell phone companies, with one-fifth of the telephones in the nation, serving two-thirds of the territory. The objective for all is the "well-telephoned home," three phones in every home the long-range target.

This joint session was followed by a seminar for about thirty of the independents' top operating executives, and nine from independent companies. The purpose was to acquaint them with the merchandising concept, and it was a long session, two weeks, with group discussions and a great deal of homework after hours. Merchandise experience was brought in from outside by specialists from Ford Motor, Sylvania Electric, Colgate - Palmolive, Harvard Business, Federal Reserve, and marketing professors, and women from the magazine field.

THE independents include many small companies in which this new technique of merchandising has to be learned and put into effect by employees, almost on a family basis, but it is already showing results.

In Miami, Texas, the independent telephone company has 260 phones. When it converted to automatic, employees staged a sales campaign, sold 46 color sets, numerous extensions, upgrades, coil and

long cords, one pay station. Leader in sales was a lineman.

As Bell parcels out market studies to regional companies, so the General Telephone Service Corporation assigns tests and surveys to different companies, to obtain information that can be used by other companies.

Typical was a loud-speaker set demonstration kit, to be taken out by salesmen, showing business executives how the "no hands" phone works. This was sent to an independent company that found a couple of hundred potential customers among its subscribers. To some was sent a letter, and others were called by phone, stating that a visit would be made for a demonstration. For check purposes, other business subscribers were not notified in advance. Fourteen sets were placed, interest was aroused in nine other subscribers, but it was decided that such canvassing was too expensive for a small company. Customer criticisms were reported for the engineering departments of equipment companies —that the sensitive loud phone destroyed privacy, picked up office noises, and was not so audible to parties on the other end as the standard set. Answering sets were similarly tested in small communities, and for lighted dials, one company made 60 test installations in subscribers' homes, to obtain reactions, generally favorable, and helpful in merchandising that device.

It was an independent company that got national attention by putting color sets into a supermarket—the General Telephone Company of Kentucky, working with a Kroger store in Lexington. The sets were placed near the canned foods, and during three days stopped several thousand shoppers. Salesmen explained the sets, gave interested persons cards with which to order, and in a few cases wrapped sets in cellophane and dropped them among the shoppers' groceries, for charging and installation. Sales added about $500 revenue. The display was, of course, a public relations gimmick as well. Significant as market information, this store is in a lower-income neighborhood, and the display showed that color phones can be sold such families.

Independents are also strong in rural areas, and as most of the farmers are on party lines, with single phones, there is ample room for merchandising. The General Telephone System has set up a test in the Midwest, making installations on about 45 farms, with extensions in the house and outbuildings, loud signals, and other essentials. Some subscribers will be upgraded, but only for a check against the majority, who will stay on party lines. The farmers will use this service without charge, for nine months, and will be interviewed periodically during that period. It may be extended to a year, as interesting information is obtained about the use of service during planting, harvest, and other seasons.

The farms are being selected according to their type of production—dairy, livestock, grain, etc.—and acreage, investment, revenue, number of hired employees, and ownership or tenancy. In fact, the survey is concerned with farm working, living, and social habits. One interesting feature of the test will be the keeping by farmers of a detailed record of all calls made and received, on standard forms furnished for the purpose, during several different periods of one week.

These periods will be scheduled by the companies according to seasons of farm activity. The installations are being made with due regard for the farmer's pocketbook, to give maximum service at minimum equipment and service charges.

Information that will later be valuable in merchandising campaigns will be along these lines:

How do farm subscribers differ from city people? What will more complete phone service do for his business and his family life? What special equipment will be needed for farm service? Can complete service be provided at a satisfactory rate? What effect will better service have upon the farmer's attitude toward the telephone company? What merchandising techniques and demonstration equipment will be most effective in selling complete farm service?

REGARDLESS of ownership or other controversial questions, merchandising for Bell and non-Bell companies appears to be about the same. Both serve the same kinds of customers. Each takes in the other's washing in toll service, and merchandising of toll service increases revenue for both. Each is able through merchandising to add new revenue, only partly affected by regulation.

In a word, in merchandising, sisters under the skin!

The Shortest Road to Progress

"ALL of our modern industrial development has been based fundamentally on the existence of the free economy and the initiative which the hope of profit creates in the individual. The proof is evident to everyone that the fastest way to progress has always been to encourage industry to invest, to invent, to develop, and to create.

"The facts are so strongly on our side that they are not even subject to honest debate. Yet millions of people do not really understand them and do not really give support to the basic principle upon which their own welfare is founded.

"How do we bring about this understanding?

"The thing that we call national public opinion—the economic climate of the country—is made up of the public opinion and the economic attitudes of 168 million people. None of our companies—none of our organizations—are in contact with all of those people, or can possibly hope to exercise great influence upon the thinking of the nation. But each of our companies is in intimate contact with some of those people. Some of them are our employees; some of them live in the towns where we operate; some of them are our stockholders; some of them are our customers; and some of them are the people from whom we buy our raw materials."

—HAROLD BRAYMAN,
Director, public relations department, E. I. du Pont de Nemours & Company.

New Voices for "The Scenic Inch"

An on-the-spot account of co-operation between two independent telephone companies and two Bell system companies. Jointly they have provided the needed communications for a 1,487-mile natural gas pipeline.

By L. GLEN SNARR*

"THIS is one of the most unusual and important jobs we've tackled in this area. To get it done will require teamwork — close co-operation every step of the way."

The speaker was C. W. Brandon of Mountain States Telephone & Telegraph Company, chairman of a special co-ordinating committee to direct an unusual telephone job. This task was to provide an intricate communication system for a new pipeline to be constructed by Pacific Northwest Pipeline Corporation to carry natural gas from New Mexico to the Oregon-Washington area, with service all along its route.

Brandon's plea for teamwork, outlined in a meeting in Denver, was directed to two Bell telephone companies, Mountain States and Pacific Telephone & Telegraph Company, and two independent telephone companies, the Midland Telephone Company and the General Telephone Company of the Northwest. Also on the "team" were Western Electric Company, and the Long Lines plant, commercial and engi-

* Writer of business articles, resident in Salt Lake City, Utah. For additional personal note, see "Pages with the Editors."

neering departments of the Bell system.

Brandon asked for co-operation at this kickoff meeting, February 28, 29, 1956, in Denver, Colorado. He got it. A full period, open wire telephone communications system for exclusive use of the pipeline company, consisting of existing installations plus considerable additional linage, carrier systems, and other facilities, was completed just four and one-half months after the initial meeting of the co-ordinating committee. As a result, communications along the entire length of the pipeline were in operation July 15, 1956, four months before the pipeline itself was completed.

To make this accomplishment possible, the two independent companies and the two Bell system companies worked closely and effectively together. Major responsibility was with Mountain States Telephone; but the facility could not have been constructed as it was without the full co-operation of the independent companies concerned.

From start to finish, the four companies co-ordinated their efforts closely. "Independent and Bell system companies often co-operate on projects, but this was a special situation in many ways," said Eric C. Aaberg, vice president and general manager of Utah operations, Mountain States Telephone & Telegraph Company.

To understand this special situation and why co-operation was so important in the project, you have to understand the pipeline itself.

Pacific Northwest's pipeline is 1,482 miles long, carrying natural gas all the way from New Mexico's San Juan basin to the Canadian border near Sumas, Washington. It traverses parts of Colorado, New Mexico, Wyoming, Utah, Idaho, Oregon, and Washington.

Distance alone is not necessarily an obstacle for pipelines. In this case, the nature of the country was a big factor. The area the pipeline traverses is, for the most part, rugged, isolated, and sparsely populated. The pipeline was dubbed "The Scenic Inch" because of the picturesque nature of its location.

This virtual wasteland had, however, proved to be a treasure chest of oil, natural gas, and other minerals. One of the great natural gas fields of history was brought in near the famed Four Corners area—the only place in the United States where the boundaries of four states meet (Arizona, Colorado, New Mexico, and Utah).

This natural gas field soon was supplying gas to southern California, Texas, and areas immediately adjacent. But in the Pacific Northwest, there was no natural gas. The pipeline was the method of supplying the fuel to hundreds of thousands of people along the pipeline route and in the Pacific Northwest area.

But the pipeline does not operate by itself. Natural gas must be fed to the pipeline in the right quantity at the right time. The gas must be pumped by compressors through the lines, and it is vital that the gas is delivered when and where it is needed.

The Pacific Northwest pipeline does not merely pick up natural gas at one end of the line and deliver it to the other. Natural gas is served to more than 100 communities along the line, including Portland, Seattle, and many other towns and cities. Also, gas is picked up at several points. Fourteen compressor stations

along the pipeline pump the natural gas through the pipeline. Including feeder lines to customers along the route, there are 2,400 miles of pipeline. The gas is pumped through these lines at a speed of 15 miles an hour, so availability and deliveries must be anticipated, and subsequent orders transmitted swiftly.

Therefore, the job of controlling the pipeline flow is an ever-changing one, depending on such factors as community needs, weather, and fluctuating use by customers.

To be sure that the gas gets to the right place at the right time requires constant supervision. Compressor stations must be given instructions, and central operations must have full information as to what is going on along the pipeline. A speedy, reliable communications system is a necessity.

The system serving the Pacific Northwest Pipeline is a full period telephone communications system for the exclusive use of Pacific Northwest Pipeline Corporation. At any time during the day or night, the dispatcher can dial any of the compressor stations and obtain from the field man the current suction and discharge pressure and other vital information. The dispatcher also can relay instructions to meet the changing requirements.

"If pressure drops at a compressor station, we've got to know about it in the event it reflects mechanical problems," says William C. Brady, superintendent of gas control of Pacific Northwest. "By the same token, if we want to add gas to the line, we must be able to instruct the supplying fields. If weather changes, or demand increases or decreases, we must communicate with the entire length of the system."

Regularly at five minutes past the hour, twenty-four hours a day, the central dispatcher in Salt Lake City dials all of the compressor stations. He receives routine information and issues instructions. Additional calls, from compressor stations or from the dispatcher, can be made whenever wanted.

"The system works dependably and efficiently—which is the important thing," says Brady.

But to provide this smooth-functioning system was not easy for the four telephone companies involved. Each had special problems. Co-operation solved the problems.

¶ "Pacific Northwest Pipeline Corporation *took a lot of factors into consideration before choosing its communications system. Microwave equipment was studied, along with telephone company facilities, over a long period, according to William C. Brady, superintendent of gas control for the pipeline corporation. Once the decision was made to use telephone line service—early in February—telephone officials went to work. The Mountain States Company's engineering department proceeded to begin the designing of the over-all facility.*"

Midland Telephone Company, with headquarters in Moab, Utah, serves the great uranium and oil country in southeastern Utah—Moab, Blanding, and Monticello; small towns, but important in oil and mining. General Telephone Company of the Northwest serves many communities of Oregon, Washington, Idaho, and reaching into Canada. These are the independents. Then there is Mountain States Telephone & Telegraph Company, covering the great Intermountain Empire of the Mountain West, and Pacific Telephone & Telegraph Company, with responsibility along the northwestern part of the system.

The four companies, two independents and two Bell system companies, co-ordinated closely, working out any problems quickly.

"The amazing thing about this job is how smoothly it proceeded. Usually there are obstacles and a lot of headaches, but because of the teamwork everything rolled right along," says R. J. Motzkus, sales engineer of Mountain States Telephone & Telegraph Company in Salt Lake City, Utah.

It was Motzkus who sold the telephone communications system to Pacific Northwest and who was the liaison man between the customer and the telephone companies. He lived with the project from its first conception to its completion—and still co-ordinates maintenance and service. His work on the project received recognition throughout the Bell system.

THE co-operation that made the system possible began among the telephone companies while negotiations with the pipeline corporation were being conducted.

When Motzkus first learned of the need by the pipeline corporation for a communications system, he arranged for conferences with the independent telephone companies involved. He and C. L. Parker, manager for Mountain States of independent company relations in Utah and Idaho, called on Midland Telephone Company, in whose territory the important Moab unit of the communications system would be built. R. J. Corbin, president of Midland, promised his full co-operation.

Representatives of Pacific Telephone Company were informed of the project and not only moved ahead with their rôle in the installation but arranged for meetings with General Telephone Company of the Northwest officials. This first meeting was held in Spokane, Washington, with R. J. Whitekettle, general commercial manager, and David Hipskind, commercial agent of General, present. They assured Ray LaBarre, sales supervisor of Pacific Telephone Company, Seattle, of their willingness to co-operate in the project. With these assurances, Motzkus proceeded with negotiations with Pacific Northwest Pipeline Corporation.

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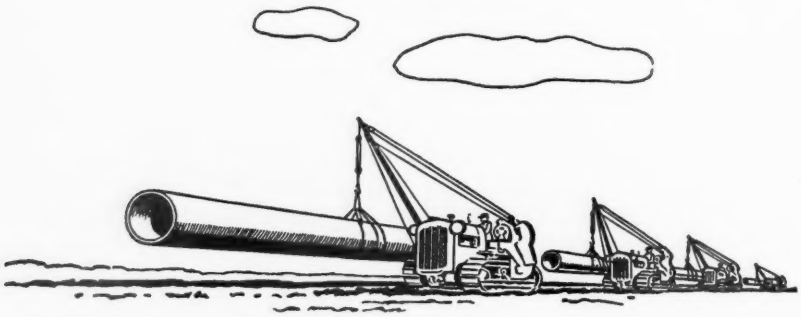
Once the decision was made to use telephone line service—early in February—telephone officials went to work.

The Mountain States Company's engineering department proceeded to begin the designing of the over-all facility.



Co-operation between Bell and Independents

"A full period, open wire telephone communications system for exclusive use of the pipeline company, consisting of existing installations plus considerable additional linage, carrier systems, and other facilities, was completed just four and one-half months after the initial meeting of the co-ordinating committee. As a result, communications along the entire length of the pipeline were in operation July 15, 1956, four months before the pipeline itself was completed. To make this accomplishment possible, the two independent companies and the two Bell system companies worked closely and effectively together."

Motzkus and other Bell system representatives again visited the independent companies. This time, they were able to provide further information as to what facilities would be needed in the independent company areas.

As soon as the contract was awarded, George I. Redhair, assistant vice president of operations for the Mountain States Company, with headquarters in Denver, appointed a co-ordinating committee with representatives of the companies and various departments invited to participate.

"The job of the co-ordinating committee was to combine the interested parties into an effective team and to keep everyone informed," according to Chairman Brandon.

The co-ordinating committee made it possible for long-range plans to be outlined with the knowledge of the various companies and departments. Meetings of the committee also enabled full discussion of problems. "These meetings were of great help in preventing misunderstandings," Motzkus said. Headquarters of the co-ordinating committee were in Denver, which is Mountain States Telephone & Telegraph Company headquarters and an important regional office for the Bell system. As installation progressed, there was close liaison work at all levels. This liai-

son work enabled difficult phases of the operation to be expedited and paved the way for rapid delivery of necessary equipment.

ANOTHER factor in successful operation of the communications system was a training school in operation and maintenance of the system. This training program was conducted in Denver by Mountain States Telephone Company, with representatives of the various companies participating.

The co-operation that built the line is still going on, with maintenance now co-ordinated closely to assure smooth operation.

"By keeping everyone fully informed at all times, we achieved our goal of a co-ordinated project. Teamwork was the answer to successful completion of the line on time," says F. D. Sawyer, Utah commercial manager.

J. W. Corbin, president of Midland Telephone Company, says "We all realized the importance of co-operation. Our firm received splendid help and guidance from the Mountain States people."

Much of the day-to-day liaison work was handled by Motzkus, C. L. Parker, and F. D. Sawyer.

The system was designed and engineered by Mountain States, to assure standardization of equipment, uniformity of installations, and the planning of proper reroutes in a co-ordinated manner.

The installation itself was then handled by the company or department having jurisdiction over the particular area.

For example, Midland Telephone Company had the job of rebuilding the line from Moab to the Pacific Northwest compressor station, which is 17 difficult miles from Moab. Midland also installed a carrier system in Moab and at the compressor station, and provided for a carrier system from Thompson, Utah, to Moab. Mountain States co-operated with Midland in this function and also installed telephone instruments and the two-tone selection signaling equipment for the operation.

In Washington state, the General Telephone Company of the Northwest provided service from Pasco to the compressor station near Plymouth, including all of the station equipment necessary. Again, this work was closely co-ordinated.

BECAUSE of the multistate nature, the northern circuit of the two-circuit communications system was installed under supervision of the Long Lines Department of Bell system, working closely with Pacific Telephone & Telegraph Company and Mountain States Telephone & Telegraph Company, as well as General Telephone Company representatives.

Construction of the system began in February, 1956, and winter in the Mountain West can be a rugged foe, as every telephone man knows. Heavy snows, wind, blizzards, and extreme cold are common in the high desert plateaus and mountains. The terrain is a hazard—rivers that carve deep cliff-lined canyons, washes slashed by flash floods, barren desert, and timbered mountains.

Because of the nature of the land, the communications system called for underground cable from Greenriver, Wyoming, to one of the compressor stations.

And on one spring day, a heavy "cat" attempting to cross a wash suddenly began to sink in the muck. The driver escaped, but the equipment sank right out of

sight. New equipment had to be rushed into the area, not only to continue the job but to find and salvage the sunken equipment. This was only one incident of many during those months of meeting a deadline.

DESPITE storms and other difficulties, work moved swiftly. Wherever possible, existing facilities were used. Because of telephone coverage of the area, frequently only new construction required was for lines from communities to compressor stations, for addition of carrier systems to increase capacity of existing lines, and instruments and facilities at the stations.

Over-all the job was a big one, requiring more than 3,500 miles of telephone lines. The job was completed early in July and then given a two-week operational checking before being turned over to the pipeline firm.

The central dispatch point for Pacific Northwest Pipeline Corporation's control of its lengthy "Scenic Inch" line is in Salt Lake City.

There are two circuits, in the communications system, a north and south loop, both terminating in Salt Lake City. The south dispatch circuit includes compressor stations near Ignacio, Colorado; Moab, Utah; Rangely, Colorado; Greenriver and Kemmerer, Wyoming. The northern circuit starts with the compressor station near Montpelier, Idaho, and includes stations near Pocatello, Murtaugh, Glenn's Ferry, and Caldwell, Idaho, and Baker, Oregon, and Plymouth, Washington. The compressor station at Plymouth has enough power to pump the gas on into Portland, Oregon, and on up to Seattle, Washington, terminal point on the Canadian border.

IN addition to the full period telephone system, each compressor station has a local business telephone served from the closest exchange. This meant that two voice circuits had to be taken into each compressor station by the telephone companies.

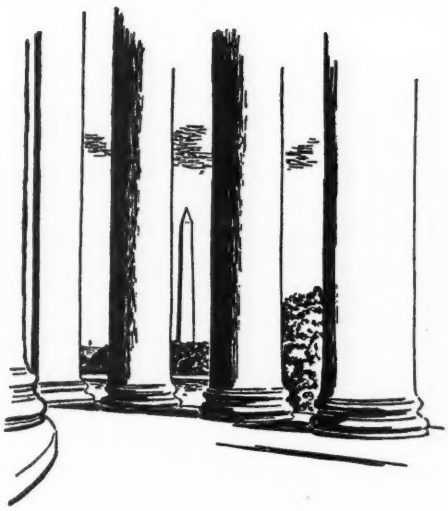
The company also has a leased line from dispatch headquarters in Salt Lake City to Farmington, New Mexico, which is a gathering point for natural gas from the field.

Supplementing the telephone system is VHF radio, which is used chiefly for point-to-point communications along the line and between mobile units and compressor stations.

Another factor that will make the sale of the communications system all the more important to the pipeline company will be added soon. This is a pipeline from Canada which will connect with Pacific Northwest Corporation's pipeline at Sumas, Washington. This will be another source of gas for Pacific Northwest's distribution into the United States, and deliveries from Canada to the United States will have to be regulated along with the rest of the complex system from the Salt Lake City headquarters.

Currently, telephone communications service is being extended into Canada to serve this affiliated pipeline, being built by Westcoast Pipeline Company, Ltd. This involves two more independent telephone companies, the Farmers Mutual Telephone Company in the Sumas area, and the British Columbia Telephone Company.

Washington and the Utilities



Niagara Project Approved

THE Federal Power Commission has granted New York state conditional authority to construct a $600 million Niagara Falls power project. The commission in granting a 50-year license reserved for future determination the type of water conduits to be installed at the project and the area of the reservoir.

The Power Authority of the State of New York, the agency to which the license was issued, is required to file with the commission within six months revised drawings covering the project works, including the water conduits and the reservoir. Construction of any of the project's structures may not be started until the commission approves the drawings.

The project, authorized by Congress in the final days of the last session, would have an installation of 9,920,000 horsepower, or 2,190,000 kilowatts.

The license requires the New York agency to commence construction within one year and to complete it within six years. It requires that preference and priority in the distribution of project power be given to public bodies and rural cooperatives within economic transmission distance in disposing of 50 per cent of the project power.

Another 20 per cent of the power subject to the preference provisions must be reserved for use within economic transmission distance in neighboring states.

Bell Denies Monopoly Charge

THE American Telephone and Telegraph Company denies that any antitrust questions are presented in its petition before the Federal Communications Commission to be permitted to enter the private radiotelephone communications field.

A contention to the contrary had previously been urged by the Justice Department's antitrust division in a bid to block FCC approval of tariffs filed by AT&T for mobile radiotelephone systems.

In its reply to the Justice Department's arguments, AT&T said approval of the proposed tariff would not give a telephone company any advantage over others in the radiotelephone communications field. It also noted that the equipment to provide the service is bought largely from outside manufacturers and there are no plans to

enlarge the company's own equipment production for this field. The company points out that the telephone company rates for the service would be regulated and would be the same for all its customers.

The customer, said AT&T, should have the choice of providing his own system, obtaining the service from the telephone company, or from other companies in this field.

A condensed statement of the telephone company's reply to the Justice Department charge said on this point:

> Telephone companies have been providing private mobile radiotelephone systems for a number of years. We are now serving a substantial number of customers all over the country. In addition, many others have asked us to provide service. They wish the telephone company to do the job because in many instances the service relates directly to their other communication needs.
>
> The service has been provided under private contract. All we are doing now is filing rates to put our service under public regulation.

THE Bell system statement added that its operation in the mobile radiotelephone field would preserve rather than lessen competition. It was noted that telephone companies have the experience and physical setup to do a good job in this newly developed communications field. In fact, in some communities—it was pointed out—telephone companies are the only organization from which customers can lease private mobile systems. The equipment is widely used for point-to-point communication between a mobile station such as a telephone on an automobile, plane, train, boat, etc., and a stationary communications base such as a dispatching center. The commonly used two-way taxicab dispatching operations are an example. The Bell system has, by the filing of tariffs with the FCC, endeavored to establish such service for public use as rendered by associated companies of the Bell system. The Bell system statement concluded:

> The whole matter is pending before the FCC. Approval of this tariff would not give a telephone company any advantage over others in the field. Telephone company rates would be regulated and would be the same for all its customers.
>
> Nearly all the equipment that we furnish in providing this service is bought from outside manufacturers and we have no plans to enlarge our production of equipment used in this field.

Jones Starts with TVA

ARNOLD R. JONES, first Republican to serve on the TVA board of directors in the twenty-four years of that agency's existence, started digging in on September 19th on problems facing the floundering federal agency almost immediately after taking the oath of office.

One problem in which he said he is especially interested is future financing, a question that has been tossed around in Washington for several years without decision because Congress has failed to agree on terms of a proposed bond issue plan to raise capital for new TVA power plants.

An immediate matter which the agency must handle is submission of its budget figures for fiscal year 1959 to the U. S. Bureau of the Budget. This requires official board action, but until September 19th, Chairman Herbert D. Vogel was the sole director, owing to the retirement last spring of Dr. Harry A. Curtis and the

more recent death of Dr. Raymond R. Paty.

Closeted with Jones in a long briefing session, Vogel said there is no deadline on getting the budget requests to Washington but that it was something demanding early attention.

He declined to say when he expects to hold his first official board meeting with the new director and added that "in a sense" they will be meeting as they get together from day to day.

ANOTHER item of business to be taken care of, Vogel said, is choice of a successor to Joseph C. Swidler as general counsel. After being with TVA since 1933, Swidler resigned last month.

Asked recently if other such key personnel changes may be in the offing, the chairman indicated there were no such plans.

As a recess appointee of President Eisenhower, the new director faces an uncertain future. His nomination, opposed by Democratic Senators, including both Estes Kefauver and Albert Gore of Tennessee, still is subject to confirmation by the U. S. Senate for the nine-year term.

Questioned whether he is confident of confirmation, he replied, "I am going to do the very best job I can in the next several months and we will have to see what the outcome is."

Black Hits Foreign Utility Financing

EUGENE R. BLACK, president of the International Bank for Reconstruction and Development, told the twelfth annual meeting of the board of governors in Washington, D. C., on September 23rd that short-range political consideration should not be the basis of loans to underprivileged countries, at the expense of basic economic consideration. Black pointed out that every ill-planned or badly executed project under such circumstances merely consumes scarce resources. He spoke of power plants built so that they operate far below their capacity, new highways built at the expense of maintaining old ones, of newly irrigated areas being allowed to lie fallow. Speaking specifically of foreign utility financing, Black said:

> One area in which this tendency prevails to a regrettable extent is the field of public utility financing. Where there is no domestic bond market, the choice between subsidies and adequate rate structures can be critically important in the context of balanced development. In one or two countries, for example, a good case could be made that subsidies to government-owned utilities are being financed at the cost of reductions in the government's education program. Actually less is being spent on education in these countries today despite an increased national budget. At the same time money is being used to subsidize public utility services—to provide cheap power to industries which, without any appreciable effect on their own costs of production, are fully capable of paying the economic cost of these services. This money might better have been used to build and staff new schools.
>
> When the choice is as clear and as compelling as this, I cannot understand why it is so difficult for governments to accept adequate rate structures. Yet the widespread tendency in underdeveloped countries today is to fix the price of utility services at a figure which, in fact, entails a subsidy for the benefit of those consumers best able to pay. This approach seriously distorts development.

Financial News and Comment

By OWEN ELY

Continued Rapid Growth of The Telephone Industry

On the occasion of the annual convention of the United States Independent Telephone Association (October 14th-16th) a review of the progress of the industry in the postwar period, and more particularly in the past year, may be of interest.

The rapid postwar growth of the telephone industry (illustrated in the charts on page 680) has continued during the past year. The number of telephones in service in the United States now approximates 62 million, all interconnected with the Bell system and enjoying world-wide service, with the exception of 2,700 telephones owned by two small companies. Over three-quarters of the 49 million households in the United States now have telephone service. The U. S. has about 56 per cent of the total telephones in the world, it is estimated.

What countries or areas do the most talking on the telephone? Surprisingly Hawaii comes first with 647 conversations per annum per capita, followed by Alaska with 572, Canada with 446, and continental U. S. with 409. We are closely followed by Sweden with 405 and Iceland with 399. Britain had only 83, Germany 60, and France 54—figures are not available for the Soviet Russia. Does the fact that foreign telephones are largely government-owned have something to do with the small extent of their usage?

Total number of phones and conversations per capita are about the only world statistics available. In the U. S. the recent statistics in the table on page 679 may be of interest, as showing the division of the industry between the two private groups, the Bell system and the independents.

Construction expenditures have been increasing very rapidly in the postwar period, reflecting not only the increase in number of telephones but also the larger proportion of dial phones (now about 90 per cent of the Bell total *versus* 65 per

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Sharp Increase in New Issue Bond Yields in 1956-57	684
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cent in 1945), and the increasing cost of construction work. In the postwar period Bell system plant has increased from $5.7 billion to $18.2 billion, a gain of 220 per cent, although the number of telephones increased only 120 per cent. Bell spent over $2.2 billion on plant last year, and in the first half of 1957 $1.3 billion. The average investment per telephone is about $345.

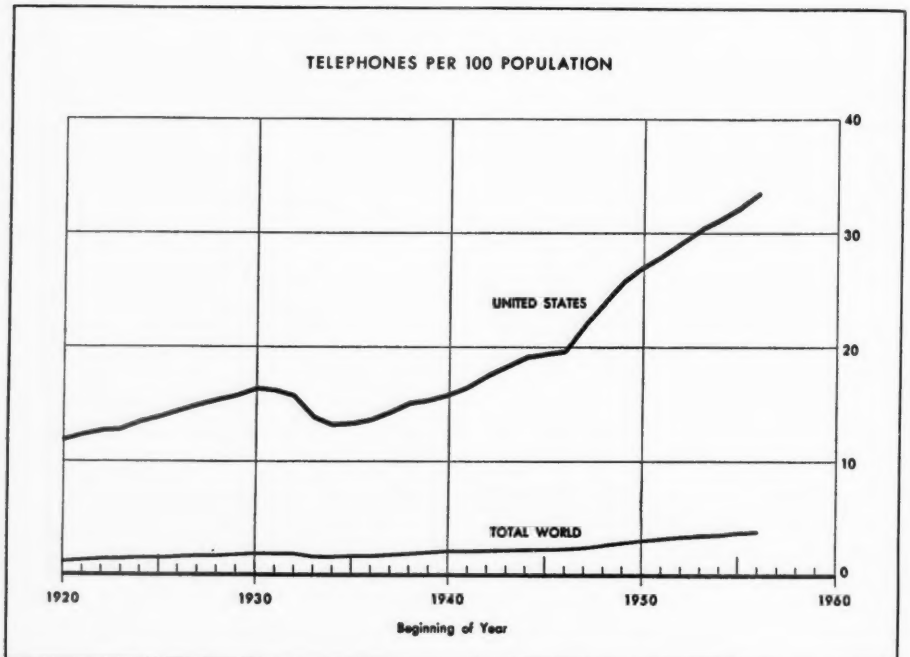
Financial statistics for the entire U. S. telephone industry are not available on an up-to-date basis. At the end of 1956 Bell system capitalization was $14.5 billion—roughly one-third in debt and two-thirds in common stock. (A subsidiary had a very small amount of preferred stock.) The Bell management feels that it must maintain a high equity ratio to afford adequate protection of dividends during periods of business recession.

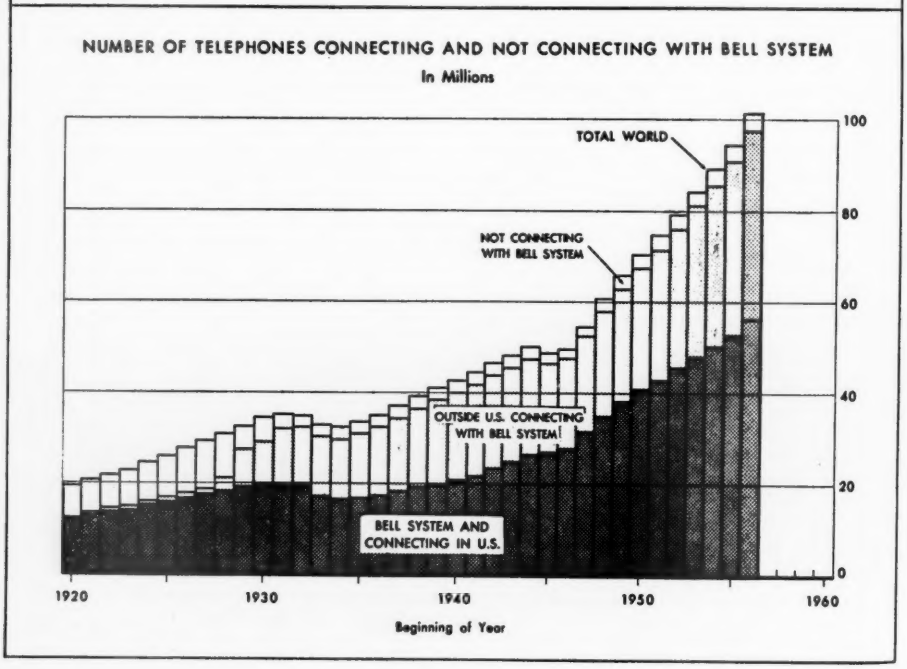
THE system is able to finance nearly 40 per cent of its construction program through retained earnings, depreciation, etc., so that last year it had to obtain about $1.4 billion new capital. About $550 million, or 41 per cent of the total, was obtained through bond issues, while most of the equity money came from a huge rights' offering to stockholders and from conversions of AT&T debentures. In 1957 there has thus far been no equity financing, but AT&T is calling its one remaining convertible issue, which was scheduled to be redeemed October 14th at 106.65. The parent company is selling $500 million straight debentures this year—$250 million 4⅞ were sold in March, and bids will be asked for another $250 million on October 29th. Subsidiaries have made the usual offerings of debentures and several have issued stock rights, including the current offering by Pacific Telephone & Telegraph and the earlier offering by Mountain States Telephone. Southern New England will also sell 1,358,300 shares through rights.

Thus far in 1957 the Bell system as a whole has done $780 million debt financing and another $320 million is presently scheduled, making a total of $1.1 billion. Some equity money has been obtained through debenture conversions and the usual employee subscriptions, as well as through the subscription offerings of common stock by subsidiaries. There has been no indication yet as to when American Telephone and Telegraph will offer its stockholders rights to a new issue of convertible debentures, or common stock. It seems possible that a new convertible debenture issue might be announced late this year or early next year, since it looks as though the system will need several hundred million dollars more of new money to take care of this year's construction requirements.

BECAUSE of the high ratings enjoyed by the Bell system debentures, it has been less affected by the rapid rise in interest rates than some of the electric and gas utilities. In January New England Telephone & Telegraph debentures were sold at a net interest cost of 4.65 per cent.

	Total Amount	*Per Cent Bell*	*Per Cent Independent*
Number of Telephones	61,970,000	85%	15%
Central Offices	21,439	49	51
Number of Companies	4,273	1	99
Average Daily Conversations	229,000,000	83	17
Plant Investment	$21,075,000,000	86	14
Revenues	$3,519,000,000	88	12
Number of Employees	771,000	85	15


TELEPHONES PER 100 POPULATION
40
30
20
10
0
UNITED STATES
TOTAL WORLD
1920
1930
1940
1950
1960
Beginning of Year


NUMBER OF TELEPHONES CONNECTING AND NOT CONNECTING WITH BELL SYSTEM
In Millions
100
80
60
40
20
0
TOTAL WORLD
NOT CONNECTING WITH BELL SYSTEM
OUTSIDE U.S. CONNECTING WITH BELL SYSTEM
BELL SYSTEM AND CONNECTING IN U.S.
1920
1930
1940
1950
1960
Beginning of Year

AT&T's big issues of straight debentures cost only 4.34 per cent and four subsidiary issues averaged about the same. In June, however, Southern Bell had to pay 4.91 per cent and in August Pacific Telephone's $90 million issue cost 5 per cent—the highest cost since 1930, when the parent company had to pay 5.22 per cent for money. The New Jersey Bell debentures in September were, however, sold on a 4.80 per cent basis.

American Telephone and Telegraph's tremendous growth has been reflected in an increase in the number of shares from about 3 million in 1915 to 17 million in 1930, 20 million in 1945, and currently over 63 million. The number of stock owners has increased in somewhat the same proportion—from about 60,000 in 1915 to nearly 700,000 in 1932, 800,000 in 1949, and about 1.5 million recently. Last year the company issued 8.8 million new shares—5.6 million through the first direct stock offering in twenty-six years, and most of the remainder through conversion of debentures. (Subscriptions by employees account for a small but steady increase.)

The 1956 stock offering accelerated the increase in the number of shareholders, with a substantial number of new accounts opened for subscriptions and also more purchases of stock in the market by new owners. Thus, over 60 per cent of the year's growth occurred in the fourth quarter when new shares were being issued under the offering. More than half of existing share owners used their rights to buy stock, and purchased more than two-thirds of the offering. Chiefly as a result of this increase in holdings, the average number of shares held rose 3.7 shares during the year to 42.1 shares, the highest in thirty-nine years.

GENERAL TELEPHONE CORPORATION, the largest of the independent telephone systems, has grown at an even faster rate than the Bell system because of internal growth plus *mergers with other independents.* That system at the end of 1956 had 2.8 million telephones in 30 states—nearly one-third of all the independent phones. This year Peninsula Telephone in Florida has been acquired, adding about 300,000 phones. Several small companies have also been acquired in the past year or so and it seems logical to expect that the company will continue this policy.

General Telephone, like AT&T, makes considerable use of convertible issues in order to provide a fairly steady increase in number of shares, as an offset to senior financing. The parent company now has outstanding two issues of convertible debentures and four series of convertible preferred stock. General Telephone is currently offering about 302,000 shares of common stock to employees. System capital structure is approximately as shown in the table below.

Both the Bell system and the General Telephone System are devoting a great

	Amount—Millions			*Per-*
	Subsidiaries	*Parent Co.*	*Total*	*centages*
Long-term Debt	$367(a)	$113(b)	$480	51%
Preferred Stock	106	19(c)	125	13
Common Stock Equity .	46	290	336	36
Totals	$519	$422	$941	100%

(a) Excludes $32 million short-term bank loans.
(b) Includes $95 million convertible issues.
(c) All preferred stock is convertible.

deal of attention to research, primarily to increase operating efficiency, which helps to offset the drain on earnings caused by the steady rise in wage rates. The dial system, now very widely used for local dialing, is making its debut for long-distance phoning. Thus, Bell in the post-war period has been able to increase the number of calls handled per employee by about one-fifth. The dial system is also helpful during labor difficulties, when local calls and even long-distance messages can be handled by supervisory employees without any great loss of efficiency, on a temporary basis.

THE dial system lends itself ideally to "automation" and progress is constantly being made toward reducing the human factor in operations, billing, etc. The Bell Laboratories this year announced a new electronic device called a spin oscillator to amplify message-carrying waves without creating the noise which is a handicap in the present system. More recently, a new microwave radio relay system was announced capable of carrying more than 10,000 telephone conversations, or a combination of 12 TV programs plus 2,500 phone calls—as well as provide increased capacity for transmitting "digital" information used in teletypewriter and data transmission. Bell Lab's President Kelly remarked that "solid state electronics will almost completely instrument telecommunication in the coming decades." Installation of the new microwave system is expected late in 1959.

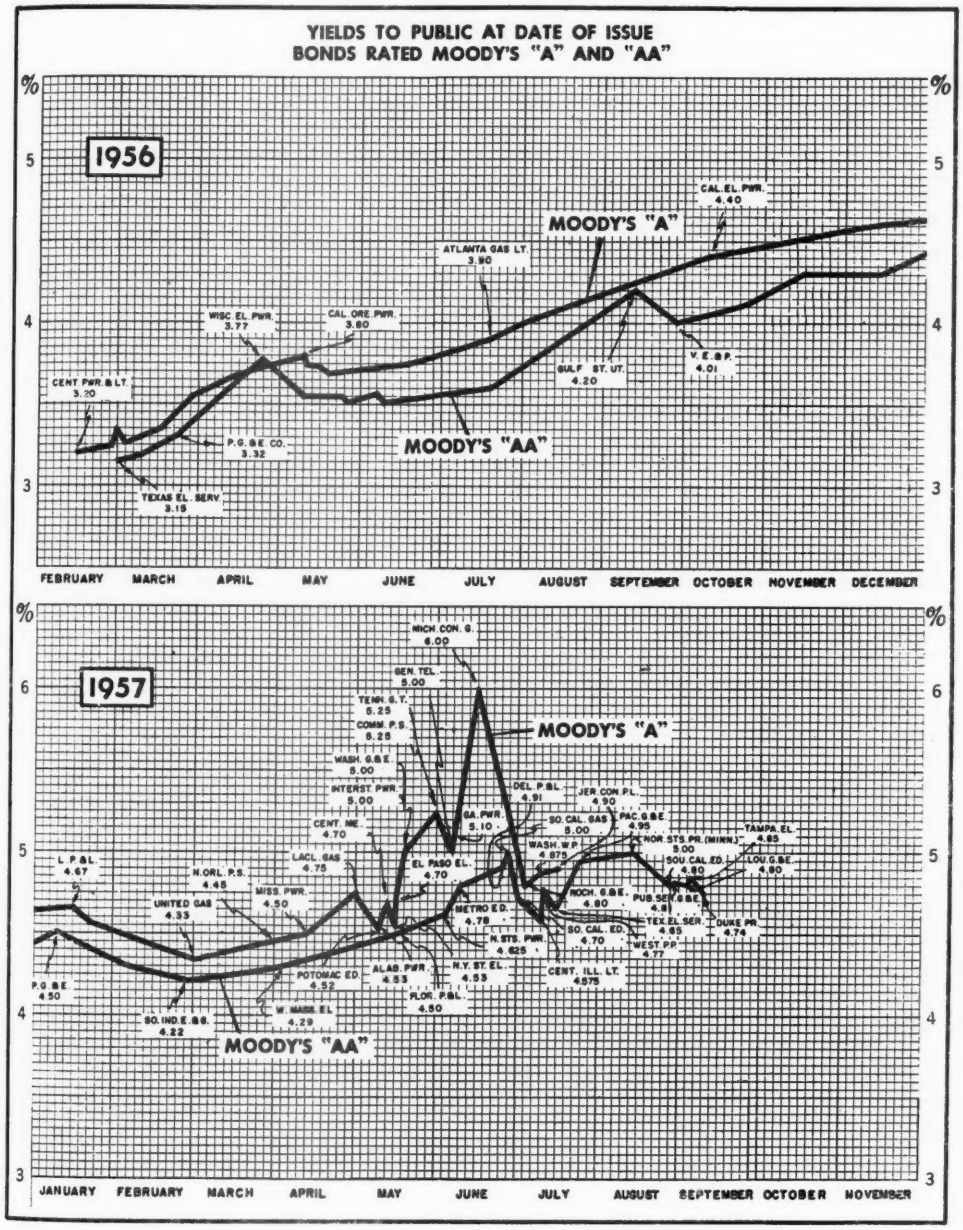
Recent Telephone Rate Increases and Pending Applications

THE Bell system's recent and pending rate cases were reviewed in this department (pages 685-6) in the May 9th issue. There has been little news recently about the important $55 million New York Telephone case, in which hearings have been completed and briefs filed, but a decision might be expected before the end of the year.

On September 21st Southern New England Telephone Company put into effect a $7.5 million annual rate increase which had been authorized by the Connecticut Public Utilities Commission; the increase was about $2 million less than the company had requested. On August 7th Pacific Telephone & Telegraph filed a proposed rate increase with the California Public Utilities Commission, estimated at about $29 million before income taxes.

Michigan Bell Telephone's request for a rate increase of $12.5 million has been rejected by the Michigan commission, which allowed an increase of only about $2.8 million. As a result the company indicated that it would have to reduce its proposed $198 million capital expenditure program for 1957-58; about $60 million of the proposed program had been earmarked for improvements "that are desirable, but dependent on better earnings."

RECENTLY the Tennessee supreme court ruled that Southern Bell Telephone & Telegraph was entitled to rate increases totaling about $6.8 million. The company had earlier put this increase into effect under bond. The court held that the action of the public service commission in refusing to hear additional proof of the need for higher rates (above those approved last December) was confiscatory. New Jersey Bell Telephone is seeking to have the New Jersey commission accept evidence based on the "trended" original cost of its intrastate properties to reflect current values. A rate increase of $14,148,000 a year is being sought. Traditionally, the commission has used orig-


YIELDS TO PUBLIC AT DATE OF ISSUE
BONDS RATED MOODY'S "A" AND "AA"
1956
%
5
4
3
MOODY'S "A"
MOODY'S "AA"
CAL. EL. PWR. 4.40
ATLANTA GAS LT. 3.90
WISC. EL. PWR. 3.77
CAL. ORE. PWR. 3.60
CENT. PWR. & LT. 3.20
P.G. & E. CO. 3.32
TEXAS EL. SERV. 3.15
GULF ST. UT. 4.20
V. E. & P. 4.01
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
1957
6
5
4
3
MOODY'S "A"
MOODY'S "AA"
NICH. CON. G. 6.00
GEN. TEL. 5.00
TENN. G. T. 5.25
COMM. P. S. 5.25
WASH. G. & E. 5.00
INTERST. PWR. 5.00
CENT. ME. 4.70
L. P. & L. 4.67
N. ORL. P. S. 4.48
UNITED GAS 4.33
LACL. GAS 4.75
MISS. PWR. 4.50
EL PASO EL. 4.70
GA. PWR. 5.10
DEL. P. & L. 4.91
JER. CON. P. L. 4.90
SO. CAL. GAS 5.00
PAC. G. & E. 4.95
WASH. W. P. 4.875
NOR. STS. PR. (MINN.) 5.00
TAMPA. EL. 4.85
SOU. CAL. ED. 4.60
LOU. G. & E. 4.60
ROCH. G. & E. 4.80
PUB. SER. G. & E. 4.8
METRO ED. 4.78
TEX. EL. SER. 4.85
DUKE PR. 4.74
SO. CAL. ED. 4.70
N. STS. PWR. 4.625
WEST. PP. 4.77
CENT. ILL. LT. 4.575
P. G. & E. 4.50
POTOMAC ED. 4.52
ALAB. PWR. 4.53
N. Y. ST. EL. 4.53
FLOR. P. & L. 4.50
SO. IND. E. & G. 4.22
W. MASS. EL. 4.29
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER

inal cost or "prudent investment." Northwestern Bell Telephone filed for a rate increase in Nebraska in January and on June 10th was granted an increase of $1.3 million. Wisconsin Telephone Company (Bell) was granted a net increase of $2.4 million July 24th.

THE General Telephone System has also begun a new series of rate increase applications to take care of higher costs. The General Telephone Company of Wisconsin was authorized recently to increase rates by nearly $1 million. Press reports indicate that General Telephone Company of California plans to ask the public utilities commission in that state for a $12.5 million rate increase.

Southwestern States Telephone has applied for an increase of about $215,000 in Oklahoma. Telephone Service Company of Ohio, another independent, has obtained a rate increase of $510,000 for two of its subsidiaries. The commission is considering an application by another subsidiary for an increase of $160,000 and applications by several others.

Sharp Increase in New Issue Yields in 1956-57

THE upward trend of coupon rates and yields on A-rated and Aa-rated bonds during 1956-57 is illustrated in the accompanying chart on page 683. The first A-rated issue in 1956 was retailed to yield 3.20 per cent while a year and a half later the similarly rated Michigan Consolidated Gas bond issue yielded 6 per cent. However, as previously explained in this department, several bond issues in June bore abnormally high coupons because the companies were not allowed by the Federal Power Commission to make the issues noncallable for a period of five years or more. More recent issues with A ratings have had coupon rates as low as 4.875 per cent.

DATA ON ELECTRIC UTILITY STOCKS

Annual Rev (Mill.)			*9/25/57 Price About*	*Dividend Rate*	*Approx. Yield*	*Recent Share Earnings*	*% Increase*	*Aver. Incr. In Sh. Earns. 1951-56*	*Price-Earn. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
$268	S	American G. & E.	33	$1.44m	4.4%	$2.12Jy	5%	9%	15.6	68%	35%
46	O	Arizona Pub. Ser.	25	1.12	4.5	1.79Je	28	13	14.0	63	31
11	O	Arkansas Mo. Power	17	1.00c	5.9	1.33Je	5	10	12.8	75	31
32	S	Atlantic City Elec.	28	1.30	4.6	1.71Au	10	10	16.4	76	29
132	S	Baltimore G. & E.	34	1.80	5.3	2.25Je	D2	8	15.1	80	41
7	O	Bangor Hydro-Elec.	32	1.90	6.0	2.65Je	D3	8	12.0	72	35
5	O	Black Hills P. & L.	23	1.44	6.1	2.18Jy	2	1	10.6	64	27
99	S	Boston Edison	47	2.80	6.0	3.45De	1	2	13.6	81	50
21	A	Calif. Elec. Power	13	.76	5.8	.96Je	8	16	13.5	79	36
21	O	Calif. Oreg. Power	27	1.60	5.9	2.20Au	NC	5	12.4	73	33
8	O	Calif. Pac. Util.	27	1.60	5.9	2.31Je	3	6	11.7	65	30
63	S	Carolina P. & L.	23	1.20	5.2	1.77Au	3	2	13.0	68	42
28	S	Cent. Hudson G. & E.	15	.80	5.3	1.00Je	D9	10	15.0	80	38
21	O	Cent. Ill. E. & G.	30	1.60	5.3	2.35Je	—	11	12.8	68	33
35	S	Cent. Ill. Light	47	2.60	5.5	3.90Au	D3	8	12.1	67	41
51	S	Cent. Ill. P. S.	29	1.60	5.5	2.34Jy	D6	12	12.4	68	38
13	O	Cent. Louisiana Elec.	35	1.60	4.6	2.01Je	D4	8	17.4	80	32
35	O	Cent. Maine Power	21	1.40	6.7	1.71Au	4	4	12.3	82	34
128	S	Cent. & South West	38	1.60	4.2	2.24Je	4	15	17.0	72	35
12	O	Cent. Vermont P. S.	15	1.00	6.7	1.10Jy	D14	1	13.6	91	31
114	S	Cincinnati G. & E.	27	1.50	5.6	1.95Je	D10	7	13.8	77	38
7	O	Citizens Util. "B"	15	.90a	6.0a	1.16Je	7	10	13.0	78	42
111	S	Cleve. Elec. Illum.	35	1.60	4.6	2.47Je	D9	8	14.2	65	49
4	O	Colo. Cent. Power	27	1.32	4.4	1.49Je	D9	8	18.1	80	33
48	S	Columbus & S. O. E.	28	1.60	5.7	2.45Je	13	5	11.4	65	33
360	S	Commonwealth Ed.	39	2.00	5.1	2.81Je	3	8	13.9	71	44

Annual Rev. (Mill.)		(Continued)	9/25/57 Price About	Dividend Rate	Approx. Yield	Recent Share Earnings	% Increase	Aver. Incr. In Sh. Earns. 1951-56	Price-Earn. Ratio	Div. Payout	Approx. Common Stock Equity
11	A	Community Pub. Serv.	24	1.20	5.0	1.86Je	10	15	12.9	65	52
2	O	Concord Elec.	43	2.40	5.6	2.67De	D1	1	16.1	90	64
71	O	Conn. Lt. & Pr.	18	1.00	5.6	1.13Au	D10	7	15.9	88	39
23	O	Connecticut Power	40	2.25	5.6	2.83Je	6	4	14.1	79	41
522	S	Consol. Edison	42	2.40	5.7	3.20Je	1	8	13.1	75	40
208	S	Consumers Power	45	2.40	5.3	3.21Au	D4	6	14.1	75	47
74	S	Dayton P. & L.	43	2.40	5.6	3.16Je	D15	8	13.6	76	43
39	S	Delaware P. & L.	43	1.80	4.2	2.72Je	20	10	15.8	66	35
237	S	Detroit Edison	40	2.00	5.0	2.57Au	13	8	15.6	78	44
130	A	Duke Power	28	1.20	4.3	2.02Je	10	20	13.9	60	52
95	S	Duquesne Light	33	2.00	6.1	2.43Je	D1	4	13.6	82	35
31	O	East. Util. Assoc.	31	2.20	7.1	2.31Jy	D11	0	13.4	95	34
2	O	Edison Sault Elec.	16	.80	5.0	1.13Je	D1	13	14.2	71	42
12	O	El Paso Elec.	23	1.00	4.3	1.38Jy	10	8	16.7	72	41
12	S	Empire Dist. Elec.	18	1.20	6.7	1.58Je	5	3	11.4	76	39
5	O	Fitchburg G. & E.	46	3.00	6.5	3.65De	4	3	12.6	82	45
49	S	Florida Power Corp.	50	1.80	3.6	2.66Je	5	19	18.8	68	36
110	S	Florida P. & L.	48	1.28	2.7	2.80Je	25	25	17.1	46	38
189	S	General Pub. Util.	35	2.00	5.7	2.94Je	D2	12	11.9	68	42
6	O	Green Mt. Power	14	1.00	7.1	1.13Je	D8	7	12.4	88	36
56	S	Gulf States Util.	37	1.60	4.3	2.25Jy	2	14	16.4	71	34
22	A	Hartford E. L.	55	3.00	5.5	4.13Je	D6	12	13.3	73	49
5	O	Haverhill Elec.	37	2.40	6.4	2.67De	2	—	13.9	88	100
21	O	Hawaiian Elec.	45	2.30	5.2	3.24Je	D4	—	13.9	71	36
78	S	Houston L. & P.	52	1.60k	3.1	2.66Au	D5	20	19.2	60	46
8	O	Housatonic P. S.	21	1.40	6.7	1.43De	1	—	14.7	98	53
27	S	Idaho Power	31	1.40	4.5	2.18Je	3	7	14.2	64	32
82	S	Illinois Power	26	1.50	5.8	1.86Jy	D9	6	14.0	81	37
43	S	Indianapolis P. & L.	29	1.50	5.2	2.07Je	3	5	14.0	72	38
20	S	Interstate Power	13	.80	6.2	.83Je	D22	3	15.7	96	30
33	O	Iowa Elec. L. & P.	27	1.50	5.6	2.01Au	D12	10	13.4	75	31
39	S	Iowa-Ill. G. & E.	29	1.80	6.2	2.47Au	D1	3	11.7	74	43
37	S	Iowa Power & Lt.	26	1.60	6.2	2.07Je	3	2	12.6	77	33
32	O	Iowa Pub. Serv.	14	.80	5.7	1.09Au	D5	5	12.8	73	35
13	O	Iowa South. Util.	21	1.28	6.1	1.72Jy	D5	8	12.2	74	37
56	S	Kansas City P. & L.	34	2.00	5.9	2.86Au	3	8	11.9	70	34
30	S	Kansas G. & E.	26	1.32	5.1	2.33Au	9	12	11.2	57	29
45	S	Kansas Pr. & Lt.	24	1.30	5.4	2.09Je	2	9	11.5	62	31
37	O	Kentucky Util.	25	1.28	5.1	2.09Je	1	9	12.0	61	34
7	O	Lake Superior D. P.	20	1.20	6.0	1.60Je	D4	6	12.5	75	38
6	O	Lawrence Elec.	26	1.60	6.2	1.46De	D22	D	17.8	109	63
98	S	Long Island Ltg.	21	1.20	5.7	1.43Je	D7	6	14.7	84	32
52	S	Louisville G. & E.	26	1.10	4.2	1.68Je	D14	4	15.5	65	41
8	O	Lowell Elec. Lt.	49	3.00	6.1	3.37De	D8	D	13.1	89	58
9	O	Madison G. & E.	44	1.80	4.1	4.30Je	NC	11	10.2	42	50
4	A	Maine Pub. Serv.	16½	1.12	6.8	1.53Au	56	3	10.8	73	33
5	O	Michigan G. & E.	46	1.60b	6.5b	4.05Je	—	14	11.4	40	37
159	S	Middle South Util.	32	1.70	5.3	2.43Jy	20	4	13.2	70	34
28	S	Minnesota P. & L.	26	1.40	5.4	2.42Au	12	6	10.7	58	36
2	O	Miss. Valley P. S.	29	1.40	4.8	2.15Au	D5	3	13.5	65	31
12	A	Missouri Pub. Serv.	13	.72h	5.5	.98Au	D5	20	13.3	73	33
6	O	Missouri Util.	22	1.36	6.2	1.87Je	D1	2	11.8	73	32
39	S	Montana Power	43	2.00	4.7	3.60Je	7	6	11.9	56	37
142	S	New England Elec.	15	1.00	6.7	1.17Je	D3	0	12.8	85	35
44	O	New England G. & E.	16	1.05	6.6	1.41Jy	D7	5	11.4	74	42
45	O	New Orleans P. S.	45	2.25	5.0	2.74Jy	6	0	16.4	82	38
2	O	Newport Elec.	16	1.10	6.9	1.23Je	D7	4	13.0	89	30
83	S	N. Y. State E. & G.	34	2.00	5.9	3.01Au	1	8	11.3	67	36
244	S	Niagara Mohawk Pr.	29	1.80	6.2	1.88Jy	NC	4	15.4	96	33
81	O	Northern Ind. P. S.	36	1.92	5.3	2.99Je	5	7	12.0	64	35
139	S	Nor. States Power	16	.90	5.6	1.18Je	—	8	13.6	76	35
9	O	Northwestern P. S.	15	1.00	6.7	1.29Je	D10	3	11.6	77	26
129	S	Ohio Edison	47	2.64	5.6	3.58Jy	D4	9	13.1	74	40
48	S	Oklahoma G. & E.	39	1.80	4.6	2.49Au	4	9	15.7	72	36
15	O	Otter Tail Pr.	26	1.60	6.2	2.17Jy	D5	7	12.0	74	38
471	S	Pacific G. & E.	46	2.40	5.2	3.32Je	D5	13	13.9	72	34

Annual Rev. (Mill.)		(Continued)	9/25/57 Price About	Dividend Rate	Approx. Yield	Recent Share Earnings	% Increase	Aver. Incr. In Sh. Earns. 1951-56	Price-Earn. Ratio	Div. Payout	Approx. Common Stock Equity
48	O	Pacific P. & L.	28	1.60	5.7	2.16Je	NC	8	13.0	74	29
129	S	Penn Power & Lt.	42	2.40	5.7	3.31Au	1	11	12.7	73	28
225	S	Phila. Elec.	36	2.00	5.6	2.47Je	D2	6	14.6	81	43
35	O	Portland Gen. Elec.	22	1.20	5.5	1.68Au	—	6	13.1	71	36
64	S	Potomac Elec. Pr.	21	1.20	5.7	1.58My	2	8	13.3	76	39
83	S	Pub. Serv. of Colo.	39	1.80i	4.6	2.79Je	9	8	14.0	65	38
300	S	Pub. Serv. E. & G.	30	1.80	6.0	2.35*Je	D5	—	12.8	77	37
75	S	Pub. Serv. of Ind.	34	2.00	5.9	2.62Jy	7	4	13.0	76	33
29	O	Pub. Serv. of N. H.	16	1.00	6.3	1.43Jy	13	13	10.7	70	32
12	O	Pub. Serv. of N. M.	16	.80	5.0	1.11Je	4	7	14.4	72	37
25	S	Puget Sound P. & L.	24	1.36	5.7	1.75Je	10	10	13.7	78	61
58	S	Rochester G. & E.	28	1.60	5.7	2.27Je	3	10	12.3	70	35
19	O	Rockland L. & P.	18	.90	5.0	1.05De	9	11	17.1	86	30
8	S	St. Joseph L. & P.	23	1.40	6.1	1.98Je	14	7	11.6	71	35
51	S	San Diego G. & E.	18	.96	5.3	1.41Jy	D10	6	12.8	68	40
8	O	Savannah E. P.	19	1.00	5.3	1.21Jy	D10	4	15.7	83	30
9	O	Sierra Pacific Pr.	22	1.20	5.5	1.98Je	27	14	11.1	61	27
195	S	So. Calif. Edison	46	2.40	5.2	3.12Je	D7	3	14.7	77	35
43	S	So. Carolina E. & G.	20	1.10	5.5	1.43Je	2	20	14.0	77	36
7	O	Southern Colo. Pr.	14	.80	5.7	1.32My	10	9	10.6	61	43
228	S	Southern Co.	23	1.10	4.8	1.55Jy	6	10	14.8	71	32
16	S	So. Indiana G. & E.	28	1.60	5.7	2.17Jy	12	5	12.9	74	36
7	O	So. Nevada Power	17	1.00	5.9	1.60Jy	18	15	10.6	63	34
1	O	Southern Utah Power	17	1.00	5.9	1.43Jy	17	1	11.9	70	39
3	O	Southwestern E. S.	19	1.16	6.1	1.64My	D1	4	11.6	71	27
39	S	Southwestern P. S.	30	1.40	4.7	1.76Je	14	4	17.0	80	31
26	A	Tampa Elec.	30	1.20	4.0	1.76Jy	18	14	17.0	68	39
146	S	Texas Utilities	42	1.44	3.4	2.50Au	13	15	16.8	58	38
40	S	Toledo Edison	13	.70	5.4	1.01Je	D3	5	12.8	69	30
14	O	Tucson G. E. L. & P.	30	1.40	4.7	2.14Je	20	14	14.0	65	35
122	S	Union Elec. of Mo.	27	1.52	5.6	1.88Ma	9	11	14.4	81	35
33	O	United Illuminating	24	1.30	5.4	1.64Je	3	7	14.6	80	48
5	O	Upper Peninsula Pr.	26	1.60	6.2	2.06Je	D5	10	12.6	78	37
41	S	Utah Power & Lt.	23	1.20	5.2	1.84Au	8	9	12.5	65	43
118	S	Virginia E. & P.	22	1.00	4.5	1.41Jy	4	14	15.6	71	39
26	S	Wash. Water Power	32	1.88	5.9	2.43Au	10	14	13.2	77	40
132	S	West Penn Elec.	25	1.50	6.0	2.10Je	—	9	11.9	72	32
64	O	West Penn Power	45	2.40	5.3	3.12Ma	D5	13	14.4	77	33
11	O	Western Lt. & Tel.	32	2.00	6.3	2.92Je	—	10	11.0	68	33
26	O	Western Mass. Cos.	39	2.20	5.6	3.16Au	4	10	12.3	70	56
105	S	Wisc. El. Pr. (Cons.)	30	1.60	5.3	2.37Je	D1	5	12.4	67	40
40	O	Wisconsin P. & L.	26	1.36	5.2	1.94Je	9	4	13.4	70	36
37	S	Wisconsin P. S.	20	1.20	6.0	1.85Jy	NC	6	10.8	65	36
		Averages			5.5%			9%	13.6	72%	
		Foreign Companies									
203	S	Amer. & Foreign Pr.	14	1.00	7.1	1.68Je	20	2	8.3	60	47
149	A	Brazilian Trac.	8	.75n	9.4	2.19De	86	D	3.7	34	73
68	A	British Columbia Pr.	40	1.40	3.5	2.34De	14	27	17.1	60	27
17	A	Gatineau Power	28	1.40	5.0	2.28De	15	15	12.3	61	32
35	O	Mexican L. & P.	14	.50o	3.6	1.67De	D7	62	8.4	84	46
13	A	Quebec Power	29	1.40	4.8	1.99De	15	14	14.6	70	52
54	A	Shawinigan Wtr. & Pr.	76	2.00	2.6	4.25De	22	26	17.9	47	39

A—American Stock Exchange. B—Boston Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. Ja—January; F—February; Ma—March; Ap—April; My—May; Je—June; Jy—July; Au—August; Se—September; Oc—October; N—November; De—December. *Based on average number of shares. **Calendar year 1955. a—Estimated annual rate. The "A" stock received stock dividends. b—Also 3 per cent stock dividend December 31, 1956, which is included in the yield. c—Also 2 per cent stock dividend January 10, 1956. f—Also 5 per cent stock dividend August 15, 1956. g—Cash dividends of $2.50 in 1956 included 30 cents extra; 10 per cent stock dividend also paid April 30, 1956. h—Also stock dividend of one share for each 200 shares held September 12, 1956. i—Also 10 per cent stock dividend November 16, 1956. j—Also 10 per cent stock dividend August 31, 1956. k—Also 5 per cent stock dividend December 17, 1956. m—Also 2 per cent stock dividend January 10, 1956; 3-for-2 split June 15, 1956. n—Also 5 per cent stock dividend December 28, 1956. o—Also 5 per cent stock dividend May 1, 1957.

What Others Think

Pioneering in the Telephone Industry

OPPORTUNITIES and the need for pioneering in the telephone industry are greater today than ever before, Frederick R. Kappel, president of the American Telephone and Telegraph Company, told 7,200 telephone people attending the general assembly of The Telephone Pioneers of America in Philadelphia on September 19th.

Speaking before the largest gathering of telephone people ever assembled, Mr. Kappel called 'Telephone Pioneers the "finest group of people in the world—and I mean real people in a real world with all its problems."

"Being real people, we don't all think alike," he pointed out. "Yet we have common interests and feelings that far outweigh all our differences. We are not yes-people but we have a tremendous amount to share with each other," Mr. Kappel told the Pioneers following the annual banquet.

"We can disagree from time to time, but we are fully together on this. We know the success of the business is vital to each of us, and that this success comes only from each of us doing his or her full part."

Mr. Kappel pointed to the reasons for the fellowship among all telephone people. First, he said, "We are joined in an important and most worth-while calling. Our vocation is to bring people together. This means so much to everybody that it cannot help meaning a lot to us.

"We do our job well and that gives us pride of accomplishment," and he added that the way we work builds mutual respect. "It takes a great pooling of brains and energy to give good telephone service. We learn to respect and admire the people we work with." In addition, he said, our ties are strengthened by the thought that each of us has truly had a share in pioneering.

Mr. Kappel paid tribute to the Pioneers —all of whom have been active in pioneering years.

"The opportunities for pioneering, and the need for it, are greater than they ever have been," emphasized Mr. Kappel.

CITING telephone service as an example, he said the tools we use to give service are becoming more effective all the time, and as we expand the telephone system we not only serve more people—we can also do a great deal more for them.

Progress does not happen by itself, he told the Pioneers. "People are what it takes—people who have skill and good judgment and the enthusiastic desire to use them both."

Looking into the future he predicted a bigger, more populous continent to serve,

a growing, ever-changing society that has more and more need for communications.

He also predicted a wide range of equipment that can be used to provide just about any kind of communication service.

"The challenge is in the way we match our performance to the need."

MR. KAPPEL pointed out that we have pioneering to do in the study of markets, organizing the production and installation of all kinds of new equipment and developing new maintenance methods, and we need to work out rate schedules for a great variety of new and improved services.

"As we broaden our 'line' each step calls for pioneering judgment and action all through the organization," he stated.

Earnings are another area for pioneering, declared Mr. Kappel. To provide the best possible service at the lowest possible cost was a pioneering pledge a generation ago. It still holds today, he said. Mr. Kappel stated:

> However, I think we have an equal obligation to convince the public and the regulatory commissions of the soundness of a complementary idea. That is, that the best service at the lowest cost in the long run depends on good earnings.
>
> Telephone earnings have been much too low. Though some companies have improved somewhat in the last few years they are still not up to a level which would really assure our ability to provide, over the long pull, the most and best service at the lowest price.

Low earnings do not mean low rates, nor do high rates come with good earnings, he emphasized. "We have a pioneering job to change the climate of public opinion. I am sure our success in this will be just as important to the future of the service, and as much to the benefit of the employees and owners of the business, as was any pioneering in the past."

A THIRD area for pioneering is providing "a business atmosphere in which telephone people can realize all their abilities and also their personal goals." This is a never-ending effort, he reminded the Pioneers. It includes helping employees know the facts about the business, providing fully adequate job training and learning how to be managers who can foster the growth of other men and women.

"We can use a lot of pioneering initiative in finding ways to be at home in more places," Mr. Kappel told the Pioneers. Whatever the community—town or city, office building where an installer works, a state or part of a state, or industry—we are related to all of them. Our services are increasingly mechanized, yet we must be at home in every one of these communities, Mr. Kappel pointed out.

As our service grows and the variety of service increases, we touch these communities at more and more points. "Conversely, they have more and more reasons for thinking about us—and for taking action which may affect us," reminded Mr. Kappel.

"Only when we understand what communities everywhere expect of us will they understand what we are trying to do."

He urged the Pioneers to look ahead. "Each year we'll be welcoming new members who have been working right along with us through this period of tremendous change and progress. We're proud of the job that is being done by those who have followed us into the business. We hope our experience and example have been of some help to them. We hope we have communicated the spirit of service—the very life of this business—to others."

"The opportunities ahead are limitless, and as we work to meet them I'm sure both the effort and the results will bring to the Pioneers of today and the Pioneers of tomorrow an overflowing measure of interest and satisfaction."

Trial Run for Toll TV

THE decision of the Federal Communications Commission to give toll television a trial run came in for some sharp criticism in a recent address by Representative Celler, chairman of the House Judiciary Committee. In a speech before the Association of Advertising Men and Women, Celler voiced opposition to the experiment "until present obstacles to the full and healthy development of free television have been cleared away." Celler said no final decision should be made until Congress has a chance to "resolve the grave policy issues that are involved." Representative Harris, chairman of the House Interstate Commerce Committee, has scheduled hearings on the issue for early January.

Celler said that if pay television should prove financially successful during the trial period, there would be "tremendous pressure" for regular TV stations to switch to the scheme. "Once such a reaction is allowed to begin," he said, "it will be well-nigh impossible to control." He predicted the networks would have to abandon their present opposition "in order to protect their investment and their positions of dominance in the industry."

Celler said he was apprehensive that, "far from improving the level of existing programming, any significant experimentation in pay TV will have disastrous consequences for the viewing public. I fear that successful tests will begin by ousting the public from free access to one after another of the already too-limited program sources, and end by confronting the viewing audience with the same old television fare as a network service, at a price."

TELEVISION networks and part of the broadcasting industry have vigorously opposed the various proposals for subscription television. They have also challenged the commission's authority to authorize pay TV. But last spring, the FCC took the position that it has the power to authorize a test. It held to that stand despite strong protests from congressional opponents. It has said that it would be deterred only if Congress passed legislation specifically banning a trial. It seems likely that opponents of toll TV in Congress will try to push through such legislation next year, before the FCC starts considering applications in March.

Five corporations have proposed various pay television systems. They are Zenith, Skiatron, International Telemeter, Inc., Teleglobe, and Blonder-Tongue, Inc. The FCC did not indicate a preference for any one system. It said only that each individual television station wishing to take part in the demonstrations must obtain commission approval for the system it employs.

UNDER most systems both the picture and the sound will be scrambled. Both would be unscrambled through a decoding device attached to the TV set. The public would pay for the program either by dropping money into a coin box or by being billed later in much the same manner it pays for telephone service. So-called subscription television, in which the telecast is transmitted on regular radio and TV frequencies, is distinct from the telephone wire TV systems which have cropped up in demonstrations in various parts of the country. Under these systems, the pro-

grams are transmitted into the homes of viewers over telephone wires, not the regular radio or television frequencies.

THE newest system to emerge in competition with others is that known as Teleglobe. The system provides for a separation of the TV signals from the sound, which is brought to subscribers through wire lines. It also leaves the home TV set completely gadget-free and eliminates all need for decoding and unscrambling devices. The basic feature of the system is that the picture could be sent over the air, just as it is at present, but without sound which would be directed from the broadcasting studio over telephone-type wires. The silent picture could be viewed by any one without charge, the idea being that the mute picture would serve as an inducement to the viewer to subscribe for the audio part for a price. The sound would be connected at the subscriber's request at a central switchboard or a central box office. An automatic switch, attached to the audio wire leading to the home TV set, would tune in the subscriber.

AT&T Defends Private Radio Proposal

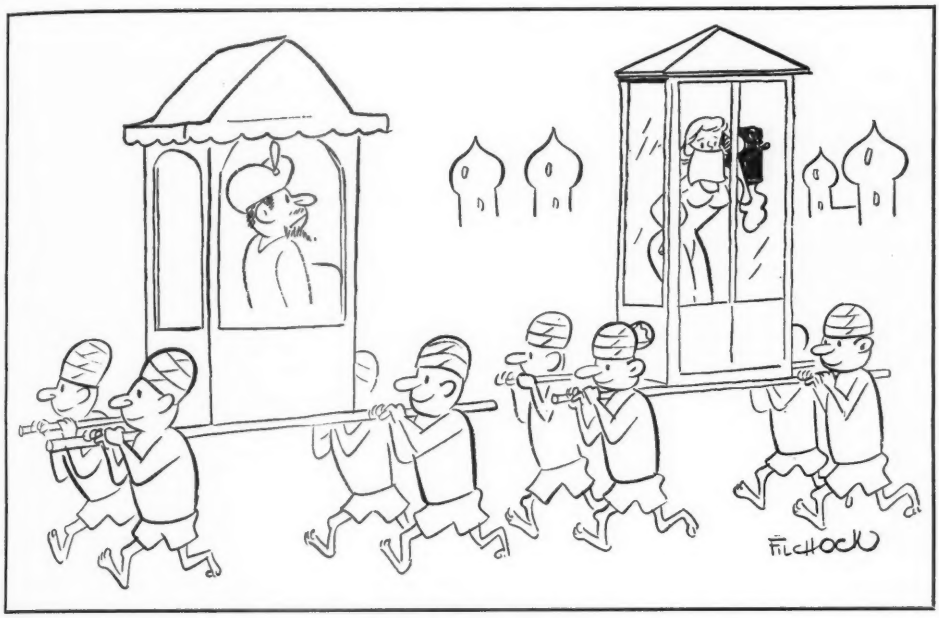
THE Federal Communications Commission has once again been requested by the Department of Justice to block the Bell system's bid to enter the private radio communications field. The proposal is opposed by the Justice Department's antitrust division on the ground that if approved it "would tend to strangle the growth of the radio equipment industry . . . and would violate various provisions of the antitrust laws."

The American Telephone and Telegraph Company wants authority to lease and maintain private two-way radio equipment of the type used by taxicab companies. Formally, the company is petitioning the FCC to put private communications systems, not presently regulated by the federal government, under federal control. The company is forbidden by a court decree from engaging in any business not supervised by federal regulations.

Replying to a statement on the subject sent to the FCC by the Justice Department, AT&T contends that Justice's intervention is based on a misreading of the Communications Act, a misconception of the nature of the proceeding, and a misunderstanding of the facts. The company flatly denies that its proposal presents any antitrust questions.

"It is apparent from the facts that the ability of the public to select the telephone companies to furnish and maintain their private mobile telephone communication systems means more, not less, competition in this field," AT&T contends. "The fact that AT&T and other Bell companies would furnish systems under regulated tariffs would in no way result in any compulsion on the public to obtain their systems from respondents. The using public would continue to have complete freedom of choice as to whether to obtain their private mobile systems from respondents or from any other source."

Attorneys for AT&T point out that telephone companies would be obliged under the tariffs to furnish such systems to all qualified licensees in their territories, in contrast to others in the field who would continue to be free to pick and choose their customers. Also, the charges, terms, and conditions under which users would obtain their systems from the telephone companies under tariffs would be subject to review by public regulatory authorities.



MOBILE SERVICE?

THE Justice Department criticized possible regulation by the FCC of AT&T's tariff on the grounds that it "may result in stagnation or even retrogression of the radio equipment industry; which may and probably will be the elimination of the incentive to reduce costs; which may and possibly will result in the use of obsolete and outmoded equipment; and which may and possibly will result in handicapping improvements in equipment and service."

AT&T replies that these charges are "fully refuted by the facts well known to the commission—and to the public generally—as to improvements in and expansion of telephone service, research, and development in services and facilities and progress in the telephone art, in both the wire and radio fields."

Bell system companies now furnish less than 5 per cent of the radio stations in all private mobile systems now in use. The radio equipment for the systems they are furnishing is purchased from many different manufacturers, Western Electric being the only one affiliated with the Bell system.

According to AT&T, only a very small number of the mobile radio units and of associated equipments in use in the systems being furnished by AT&T were manufactured by Western Electric.

A FURTHER argument advanced by the Justice Department against AT&T's position is that the tariff offered by the company does not constitute the furnishing of a public communications service within the meaning of Title II of the Communications Act, subject to regulation by the FCC. According to the department, Title II of the act sets forth duties and obligations of common carriers engaged in communication services and the powers of the FCC relating thereto; Title III, on the

other hand, sets forth the duties and obligations of licensees, other than common carriers, to whom are allocated channel frequencies by the FCC and the powers of the commission relating thereto. It is the department's view that Title II and Title III are mutually exclusive and that a tariff filed under Title II can only apply to persons and matters coming within the purview of that title.

AT&T challenges this interpretation of the act. It argues that, instead of being mutually exclusive, Titles II and III are closely related in actual application of the act to common carrier services. "Since the Communications Act was passed in 1934, the commission has, under Title III, licensed thousands of radio stations to be used in the performance of common carrier communication services by respondents and other carriers, tariffs for which have been filed with the commission under Title II of the act," AT&T states in its reply.

In the concluding section of its argument, the Justice Department asserts that the characteristic and essential element of a common carrier for hire by wire or radio communication is its toll and exchange switching system through which connections are made between telephones, and it is the offering of such a service which makes a telephone system public and which establishes the necessity that it be regulated as a public utility. It is further asserted that a system not connected with the toll and switching system and which is utilized by the licensee exclusively for communication between his own mobile units is a "private" system and for that reason is not subject to public relation.

Answering this contention, AT&T states:

> . . . Private line services have been offered by telephone companies to the general public since the beginning of the telephone industry. In these services, the necessary communication facilities are provided by the telephone company for the exclusive use of the customer. This is what is signified by the term "private." The term does not mean that these services are not included in the telephone company's service offerings to the general public. In fact, the designation, "private," is used by the telephone companies in public tariff offerings of these services.
>
> Accordingly, private line services have long been regarded as subject to public regulation.

In conclusion, the Justice Department's argument that the leasing and maintenance of equipment to be used in private communications systems is not clothed or vested with a public interest is, according to AT&T, contradicted by the department's earlier statement that "these systems are no longer looked upon as luxury items but as necessities in the conduct of efficient business operations."

"There is a substantial need and demand for private mobile telephone communication systems," states AT&T, "and many users of such systems, representing a wide variety of interests and activities, have found it distinctly to their advantage to have the telephone companies furnish and maintain their private mobile systems, including many systems which are auxiliary to other private line services furnished by the telephone companies."

INGAA Holds Annual Meeting

THE present 6 to 6.25 per cent profit allowed natural gas companies by regulatory bodies dominated talks and discussions at the annual convention of the Independent Natural Gas Association of America in Houston, Texas, early last month.

Noting that the natural gas industry is the fifth largest in the United States, Clare H. Zachry, president of the American Gas Association, pointed out that a 6.5 per cent interest rate on new bond issues is now becoming necessary. If the pipeline companies are limited to 6 per cent profit, Zachry said, then they can no longer obtain enough capital loans for improvements and make a reasonable profit on the money after interest.

R. B. Stewart of the Phillips Petroleum Company, chairman of INGAA's producers' committee, said 25 cents per thousand wellhead price for natural gas is not only possible but necessary for the gas producers to continue to search for new reserves. The United States had 1,020 trillion cubic feet in reserve at the end of 1956 and since that time the figure has been cut an estimated 20 per cent. However, figures on display at the convention showed that the demand is up more than 25 per cent.

The natural gas industry needs to make a concentrated effort to give the consuming public a clearer picture and better understanding of the natural gas business, Stuart F. Silloway, president of Pacific Northwest Pipeline Corporation, told the convention. Silloway said that a united front by pipelines, distributors, and producers is needed to offset the public impression that the natural gas business is "a constant altercation between the producer, pipeliner, and distributor, with little if any thought given to the consumer."

SILLOWAY cited the electric industry as an example of a well-organized, public relations-conscious business. He noted that "in addition to being largely interconnected physically, all units of the electric business work and speak for a common cause—the advancement of the electric industry." Electric appliance manufacturers spend large sums of money on merchandising, he continued, as well as making large research outlays to build better appliances.

Many electric companies also merchandise appliances, he added.

In the case of the natural gas industry, however, Silloway said that "many gas distribution companies have largely abandoned the merchandising of gas appliances," causing the industry to lose ground in the battle for business with the electric companies. He said the natural gas industry needs to entice "one or more successful higher-powered industrial organizations into the gas appliance field."

Silloway also deplored the confusion generated by having two representative bodies for the industry—INGAA and the American Gas Association. The INGAA is regarded as the association of gas pipelines and producers, while the AGA is thought of as mainly composed of gas distributors, Silloway said. He proposed the possibility of a joint committee between the two groups to work on the problem.

FEDERAL Power Commissioner William R. Connole called for a national fuels policy to guide the development of the natural gas industry through a period of apparently insatiable demand and sharply limited supply. Connole said it is absolutely essential that the FPC and the industry weigh carefully any expansion program.

The March of Events

FCC Ordered to Reconsider Decision

A U. S. court recently ordered the Federal Communications Commission to reconsider its decision to let a Mexican television station use U. S. network shows for relay to this country "in the public interest."

Three judges of the U. S. court of appeals ordered reconsideration of a 1956 FCC order allowing Station XETV at Tijuana, Mexico, to affiliate with the American Broadcasting Company. The station can be received at San Diego, California. The two other San Diego network stations, KFMB-TV (CBS) and KFSD-TV (NBC), protested that "defects in programming" by XETV are against the U. S. public interest. They said a Mexican station is not subject to FCC regulations on length of commercials and liquor and patent medicine advertising.

The FCC's position in the original ruling was that it is in the public interest for San Diego viewers to have access to all three major networks.

Cable Contracts Signed

THE American Telephone and Telegraph Company announced recently the signing of contracts with French and German telephone agencies for construction of an undersea telephone cable system between the North American and European continents.

The double cable, with 36 voice circuits, will be laid next summer between Clarenville, Newfoundland, and the Brittany peninsula of France.

Parties to the contract in addition to AT&T are the French Ministry of Posts, Telegraph, and Telephones; the German Federal Ministry for Posts and Telecommunications; and Eastern Telephone & Telegraph Company, a Canadian subsidiary of AT&T. The American Company will bear 64 per cent of the $40 million cost, with the French and German agencies bearing the remainder, AT&T President Frederick R. Kappel said.

Coal Industry Opposes Gas Import

COAL industry representatives recently urged the State Department to oppose importation of natural gas from Canada by an affiliate of Tennessee Gas Transmission Company, Houston. Twelve spokesmen for the coal-producing industry, the United Mine Workers of America, railroads, and coal distributors presented their opposition to Deputy Under Secretary of State Douglas Dillon in a one-hour meeting.

The case at issue involves a proposal by Midwestern Gas Transmission Company,

also of Houston, to import approximately 204 million cubic feet a day of natural gas from Canada. The affiliate of Tennessee Gas wants to build a pipeline from Edmonton, Alberta, to Tennessee and serve midwestern markets along the way. Now before a Federal Power Commission examiner, the proposal is being fought by other U. S. natural gas companies and by the coal industry.

California

Asks Boost in Gas Rates

THE Pacific Gas and Electric Company last month asked the state public utilities commission for a boost in gas rates to bring in an additional $9,129,000 a year. The increase would add about 30 cents a month to the average residential bill, effective January 1st.

Also pending before the commission was a request by PG&E for an increase of 5.94 per cent in electricity rates to meet a jump in the price of fuel oil. Should that application be granted, it would add 37 cents a month to the average electric bill in California homes and would produce $16.6 million in new revenue for PG&E.

PG&E said the gas increase was necessary to offset a scheduled rate boost by the El Paso Natural Gas Company of Texas, which supplies two-thirds of PG&E natural gas. Because of the El Paso increase, PG&E said, cost of importing out-of-state gas will go up by $9,348,000 as of January 1, 1958. The El Paso increase, however, is subject to hearings before the FPC next year—at which time it may be scaled down.

If such is the case, PG&E said it would refund to its customers any of its increase which might exceed El Paso's rate.

New Gas Rate Boosts Requested

FURTHER increases in natural gas costs to southern California consumers became a prospect recently when Southern California Gas Company and Southern Counties Gas Company each filed petitions with the state public utilities commission requesting new rate boosts.

Southern California Gas Company, which serves 1.6 million consumers, asked for a rate increase which would total $6,858,000 a year. This would be in addition to an increase of $13.5 million asked last March and now pending before the commission. Southern Counties Gas sought an increase totaling $3,237,000 a year. Last September 19th the company was granted an increase of $6.5 million in gross revenues which went into effect on October 1st.

Principal reason given by both utilities in their petitions for rate revision is the added cost of natural gas from out-of-state producers.

Iowa

Says Ruling May Aid Profit

SETTLEMENT of the Iowa-Illinois Gas & Electric Company's gas rate case by the state supreme court last month could have a "substantial" effect on the utility's earnings, Charles H. Whitmore, president, said.

In brief, the court held that the "fair value" of the company's properties must be considered in setting gas rates in Fort Dodge and that annual depreciation charges should be related to present property values.

No immediate improvement in earn-

ings is, however, anticipated since gas rates in Fort Dodge were raised in February, 1956, as the result of a lower court decision, he said. Revenues resulting from that boost have been collected but held under bond.

Although rates in other communities were not affected directly by the higher court's action, the ruling is expected to establish a precedent upon which proposals for rate increases can be based.

Net income this year, Mr. Whitmore said, will be "very close" to 1956 results which equaled $2.41 a common share after preferred dividend requirements. However, kilowatt-hour sales thus far this year have been running about 5 per cent ahead of the year-ago period.

Michigan

First to Abandon Gas Restrictions

RESTRICTIONS on the use of natural gas for space-heating customers were lifted for a small southeastern Michigan company recently. Citizens Gas & Fuel Company, of Adrian, became the first to abandon restrictions imposed by the state during World War II.

"This is the beginning of the end of state controls on the use of gas heat for homes," said Otis M. Smith, state public service commission chairman. He said that Michigan Consolidated Gas Company, which serves 485,000 Detroit and Ann Arbor homes, is expected to file its request to lift the restrictions before the 60-day deadline expires on November 6th. The Battle Creek Gas Company is expected to be next, Smith said.

Restrictions were imposed in 1944 when war plants received top priority for gas.

New York

Wins Higher Steam Rates

CONSOLIDATED EDISON COMPANY of New York city won permission recently to increase its rates for steam service by $1,979,400 a year, subject to a possible cutback later.

In granting the boost, effective October 1st, the state public service commission said the company would have to make refunds if the rates later were found to be too high. The commission instructed the company to keep an accurate record of revenues.

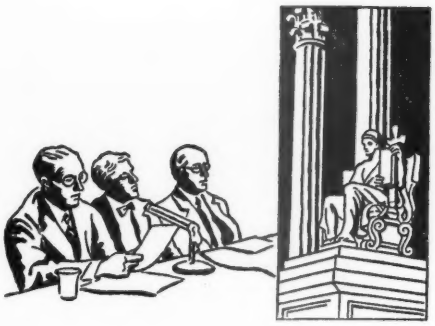
The commission said it would hold public hearings in New York city on dates to be announced later.

In seeking the boost, Consolidated Edison maintained it needed more income to offset increased costs of providing steam service.

Pennsylvania

Fare Increase Blocked

THE state public utility commission recently suspended for six months a request by the Pittsburgh Railways Company for fare increases which would give the company increased revenues of about $1,078,000 a year. The commission, however, ordered hearings in the case to be started in Pittsburgh on September 27th because of what it called "a threatened mass transit strike" scheduled to begin October 14th.



Progress of Regulation

Trends and Topics

Payments to Affiliates for Materials and Equipment

OPERATING expenses and costs to be included in the rate base of a regulated company receive careful scrutiny by commissions when purchases are made from affiliated companies. The problem is similar to that discussed in PUBLIC UTILITIES FORTNIGHTLY, June 21, 1956, page 937, where payments to affiliates for services are considered. The need for proof to support such costs has been recognized by many courts and commissions.

U. S. Supreme Court Decision

The Supreme Court, in the Illinois Bell Telephone Company case, in 1930, referred to a lower court finding as to the average profit of Western Electric Company on its total business. The finding, said the Supreme Court, did not go far enough. Western Electric not only manufactured apparatus for licensees of the Bell system but engaged in other large operations and it could not be assumed that net earnings on the entire businesses represented net earnings from sales to Bell licensees generally or from those to the Illinois company. Nor was the argument on this question answered by a mere comparison of prices. There should be findings as to net earnings of Western Electric realized from the sale of equipment to licensees of the Bell system and the extent to which, if at all, profit figured in the estimates upon which a charge of confiscation was predicated in the rate proceeding (PUR1931A 1).

Wisconsin Commission Views

In the recent case involving rates of General Telephone Company of Wisconsin, 2-U-4700, September 3, 1957 (reviewed post, page 700), the Wisconsin commission stated its intention to investigate the reasonableness of such relationships but said that the company had been affiliated with the manufacturing units for such a short time that only an insignificant portion of the total investment in property and plant had been added during the period of affiliation.

The common stock of General Telephone Company of Wisconsin is owned by

General Telephone Corporation. Automatic Electric Sales Company and Leich Sales Corporation are owned by manufacturing units which, in turn, are owned or controlled by General Telephone Corporation. About 90 per cent of equipment purchases by the operating company in 1956 were from Automatic and Leich. The company contended that it had made no changes in its purchasing policies as the result of the merger or acquisition by General of these manufacturing units.

Prices quoted for equipment were said to be the same as those quoted to independent telephone companies outside of the General Telephone System, except that the affiliated companies were granted a 3 per cent discount from list prices and, in addition, enjoyed a quantity price quotation on single items. There was submitted a list of representative telephone materials showing the quoted prices of other manufacturers as compared with prices of Leich and Automatic. The prices of Leich and Automatic were lower. The Wisconsin company further contended that its arrangement was advantageous because it was able to standardize on materials, and in turn save on the training of its man power. The commission said it did not consider price comparisons as conclusive of the reasonableness of the prices paid for equipment purchased from Automatic and Leich.

The Wisconsin commission, in Bell Telephone cases, with more evidence as to costs over a longer period of time and also evidence as to profits, has allowed payments to the Western Electric Company because prices were generally lower and earnings of the affiliate from Bell business were reasonable for a manufacturing concern (80 PUR NS 482; 93 PUR NS 490).

Reasons for Allowance or Disallowance

Prices paid to an affiliated manufacturer have been allowed as a proper cost in numerous cases on the ground that purchases of this sort were advantageous to a telephone company and ratepayers. Reference has been made to economy and standardization of equipment. Prices have been shown to be lower than those charged by other manufacturers.

On the other hand, some commissions have not considered comparative prices conclusive, and they have gone into the question of profit to the affiliate. In some cases it has been said that the affiliate is entitled to no greater return on sales to the telephone company than the latter is entitled to earn. Purchases at prices which would produce more than a reasonable profit to the manufacturer have been criticized. Failure to obtain competitive prices has also been advanced as a reason for refusal to allow such costs.

Illustrative of the views on this subject are a few decisions reported during recent years. The Alabama commission, denying an application by Southern Bell Telephone & Telegraph Company for authority to increase rates, referred to a decision of the state supreme court (84 PUR NS 221) that the amount paid for materials and supplies is the province of management and subject to review only when arbitrarily exercised. The commission, however, discussed payments to Western Electric and said that proper safeguards had not been set up to control expenses, that prices for materials and supplies and

for installation work appeared to be excessive or at least to have been accepted by Southern Bell without any attempt to obtain competitive prices (4 PUR3d 195, 222).

The California commission modified claims for payments made by Pacific Telephone & Telegraph Company under the Standard Supply Contract so as to provide a return on sales no greater than the return which Pacific would be allowed. The commission discussed several earlier cases dealing with the same subject and proposals by the staff as to a proper method for dealing with such purchases (5 PUR3d 396).

The Massachusetts commission allowed payments by New England Telephone & Telegraph Company to Western Electric for equipment where it appeared that prices of competing suppliers of comparable equipment were from 112 to 177 per cent of the affiliated supplier's prices. Moreover, it did not appear that an excessive profit was being realized by either the supplier or its parent company from these purchases (2 PUR3d 464).

The Michigan commission has expressed the opinion that a manufacturing affiliate should be treated as though it were a public utility and entitled to earn no more on the portion of its capital devoted to business with the telephone company than the return found reasonable for the latter. The commission concluded that profits of Western Electric on materials, supplies, and equipment used in operations of Michigan Bell Telephone Company should be excluded from operating expense to the extent that they exceeded the return found reasonable for the telephone company (5 PUR3d 301).

The New York commission ruled that purchases of equipment by New York Telephone Company from Western Electric should be allowed where costs were less than costs of similar items available from independent producers, notwithstanding the fact that the independents' prices were not strictly comparable. The supply contract in general was said to be beneficial to the subsidiaries in the Bell system (5 PUR3d 33).

The Montana commission ruled that payments made by Mountain States Telephone & Telegraph Company for equipment should be allowed where it was not possible to purchase in other markets at lower prices than those offered by Western Electric. The Standard Supply Contract was not mandatory and the company was free to purchase in other markets if it should find better prices. The commission said that failure to buy from Western Electric under the circumstances would be evidence of poor management. One example of this was the price of a telephone set. Western Electric's price to the company was $13.07 while the lowest price in the general trade was $26.06. Prices on other items were said to be comparable as to the differential (1 PUR3d 215).

The Pennsylvania supreme court, in reversing a commission order authorizing increased rates for Commonwealth Telephone Company, criticized the commission for failure to require proof establishing the reasonable necessity of dealings with affiliates and cost to, and profits of, such affiliates in connection with property transferred to the affiliate in constructing additions to the company's plant (10 PUR3d 464). Later, the state commission decided a rate case involving payments to Western Electric (not the manufacturing

affiliate in the Commonwealth case), and it made no adjustment for payments by Bell Telephone Company of Pennsylvania when, apart from the convenience provided to the telephone company, there was ample proof that the prices were not in excess of the reasonable cost of furnishing the equipment, plus a reasonable profit (16 PUR3d 207).

The Rhode Island commission, although recognizing the fact that the Bell system occupies "the analogous position of being at the same time buyer and seller," made no disallowances for prices paid to Western Electric. There was testimony to show that prices were substantially lower than those of other manufacturers for comparable items. Criticisms were said to be weighty, but the commission was confronted with the fact that the reasonableness of payments could not be determined within the confines of the hearing (83 PUR NS 161).

Review of Current Cases

Telephone Rate Schedules Designed on Exchange Basis to Produce Over-all Fair Return

THE Wisconsin commission authorized the General Telephone Company of Wisconsin to increase rates so as to produce a return of 6.39 per cent on a rate base computed from estimated investment in exchange plant only, less depreciation reserve, plus an allowance for materials and supplies. A return of 6.37 per cent had been found to be just and reasonable on a rate base computed from estimated investment in toll and exchange plant, less depreciation reserve, plus an allowance for materials and supplies.

Zone of Reasonableness

The commission, consistent with its previous decisions involving this company and other telephone utilities operating in the state, designed rate schedules on an exchange basis, grouping exchanges where extended service is furnished among the exchanges. The rates of return showed a considerable variation between exchanges or exchange groups. The commission said it would be ideal to obtain a rate of return for each exchange or exchange group which equaled the average of 6.39 per cent for all exchanges. However, for a number of reasons this objective was not obtainable.

The commission recognized that the rates which would prevail at some exchanges were at a comparatively high level but there was no alternative when the over-all cost of rendering telephone service was considered. As pointed out by the state supreme court in Milwaukee & S. Transport Corp. *v.* Wisconsin Pub. Service Commission (1955) 7 PUR3d 625, both the commission and the court were committed to the prudent investment theory of rate making. In conformity with this theory a return on the net investment in plant and all actual costs of its operation and maintenance, together with depreciation thereon and taxes assessed against the business, are proper cost items to be covered by the rates for telephone service.

The increase in rates authorized for an exchange or group of exchanges would provide for a maximum rate of return of 8 per cent. Rates at nine exchanges had been

reduced to this maximum rate of return level.

The commission considered that the deviation of the rate of return for an exchange or group of exchanges between the average of 6.39 per cent and 8 per cent was within the zone of reasonableness within which it was permitted to exercise discretion. It was noted that under system-wide rates, proposed by the company, three of the exchange or exchange groups would be operated at a loss while 26 would produce rates of return in excess of 8 per cent up to a maximum of 22 per cent.

Proposed Wage Increase Disallowed

The commission adjusted the company's figures to eliminate a proposed wage increase to employees expected to be granted sometime during 1957. If a wage adjustment should materialize, the commission had no indication whether it would be more or less than the amount included in the applicant's estimate of expenses as of December 31, 1957. In view of the lack of a definite commitment to make such increased wage payments, the commission thought it should be eliminated as a part of anticipated expenses.

Because of this, other costs dependent on the increase in labor costs, such as payroll taxes, would be decreased. Appropriate adjustments of state and federal income taxes would also be required.

Payments to Affiliates

All of the common stock of General Telephone Company of Wisconsin is owned by General Telephone Corporation and the operating company receives certain services from General Telephone Service Corporation and purchases materials which go into its plant from Automatic Electric Sales Company and Leich Sales Corporation, owned by manufacturing units which, in turn, are owned or controlled by General Telephone Corporation. Since General Telephone Service Corporation is a nonprofit organization owned by the operating companies composing the General Telephone System, which renders service at cost, the commission was of the opinion that the payments for services might be considered as reasonable for the purposes of this proceeding. The commission also considered payments for equipment purchased from affiliates (discussed under Trends and Topics, ante page 697). *Re General Teleph. Co. of Wisconsin, 2-U-4700, September 3, 1957.*

Commission May Not Fix Price of Approved Stock Issue

THE supreme court of errors of Connecticut held that the commission, having approved the application of the Southern New England Telephone Company for authority to issue stock in all respects except the issuing price, exceeded its authority in specifying the price at which the stock should be issued. The commission had found that the purpose of the issue and sale of the additional common stock was in the public interest (15 PUR3d 333). In so doing, however, it had disapproved the offering price of $30 per share and authorized issuance at $32 per share.

The issuance of securities by public utilities is governed by general statutes requiring commission approval. The statutes also provide that the commission shall not require a company to issue common stock under terms or conditions not required by the general statutes. The commission argued that the offering price per share does not constitute a term or condition of

issue within the meaning of that section.

The court disagreed, however, holding that the subscription price to be paid by the stockholders under their pre-emptive rights and by others who purchase the stock is included in that phrase "terms or conditions." It said that since there is no general statute which requires the par value stock of any corporation to be issued at a price in excess of par, the order of the commission falls within the express prohibition of that section.

Another statutory provision was cited in support of this conclusion. This statute concerned pre-emptive rights of stockholders of any corporation organized under the general or special laws of the state. It grants to each such stockholder the right to purchase his pro rata proportion of capital stock issued at such price, within such time, and on such terms as shall be fixed by the board of directors. Public utility corporations and their stockholders are not excepted. *Southern New England Teleph. Co. v. Connecticut Pub. Utilities Commission, 134 A2d 351.*

Hypothetical Debt Ratio Used in Fixing Telephone Rates

THE Connecticut commission disapproved the Southern New England Telephone Company's proposal to increase rates by $9,490,000 a year, but it authorized the company to file a revised rate schedule which would provide $7,490,000 in increased revenues. This would represent a return of about 6.01 per cent, and would in the commission's opinion be sufficient to enable the company to meet its total expenses, fixed charges on debt securities, and to pay reasonable dividends to its stockholders, as well as to have a balance for surplus.

The company proposed increases ranging from 10 to 12 per cent in residence and flat business exchange rates, some exchange reclassifications, increases in individual line message business service and semipublic service, an increase of 25 cents per month for residence and business extension stations, and various other increases.

Debt Ratio

The commission observed that it must consider whether such rates would provide a fair return on the company's property as well as sufficient revenues to meet the cost of operation, to service debt and equity securities, and have remaining a reasonable balance for surplus. It believed that the capital structure of the company was the determining factor in considering its needs with respect to the servicing of outstanding securities. Since World War II, federal corporate tax rates have risen to a point where it is necessary for the company to obtain more than $2 in revenue from subscribers for each dollar available in net earnings after payment of tax deductible expenses.

Like other operating companies of the Bell system, the Southern New England Telephone Company has consistently attempted to maintain a low debt ratio. The federal corporation tax structure makes such a low ratio an expensive luxury which must be borne by ratepayers. This is so because interest on debt securities is tax deductible whereas dividends on stock are not so deductible. Consequently, a lower debt ratio requires higher revenues for servicing the company's stock.

The commission concluded that the ratepayers should not be penalized by the company's decision to maintain an unduly low debt ratio. It believed that for rate-

making purposes a ratio of debt securities to total capitalization of not less than 40 per cent should be assumed. It predicated its analysis of the company's revenue requirements upon this debt ratio.

In support of this action, the commission cited a decision of the Louisiana supreme court (18 PUR3d 329) in which a debt ratio of 45 per cent was applied, while the Southern Bell Telephone & Telegraph Company's actual ratio was 22.3 per cent. It also cited decisions of the Massachusetts supreme judicial court (6 PUR3d 65) and of the New Hampshire supreme court (99 PUR NS 111).

Separation between Inter- and Intrastate Plant

The company divided its operations between interstate and intrastate business, and sought a return only on the intrastate portion. The separations study of the company's plant investment, revenues, and expenses between intrastate and interstate business was based on the Separations Manual promulgated by the NARUC and the Federal Communications Commission with the various modifications which have been adopted. The separations were based on actual usage. The commission found that the method used by the company in determining results of operations in Connecticut was reasonable, although it observed that it has not formally accepted the NARUC Separations Manual.

Working Capital Allowance

Unlike most utilities in Connecticut, the company bills its patrons in advance. For those companies that bill in arrears, the commission has generally approved a 45-day working capital allowance. The company claimed that although it bills in advance, because of the administrative lag in the processing of bills, and due to the average time that elapses before bills are actually collected, it does not receive payment until two days after the end of the service month.

The commission pointed out, however, that a similar delay results in the collection of bills by utilities that bill in arrears. It disallowed the company's claim for working capital in view of its conclusion that the company received ample working capital from its practice of billing in advance.

Inflation Factor

The company has been before the commission three times since the end of World War II seeking higher rates. It claimed that it did not, in fact, receive the return which the commission had found reasonable in these prior rate proceedings because of the continuous rise in the cost of operations brought about by the postwar inflation. The commission was requested to consider this factor and to grant the company a return which would take into account the company's prognosis that its rate of return would decline in subsequent years.

In other words, the company sought rates sufficiently high to provide it with a "built-in cushion against inflationary influences" to reduce the probability of its need to seek further rate relief within the foreseeable future.

The commission rejected this request on the ground that it would require unduly higher rates from current telephone subscribers who have no such "built-in cushion" against inflation. It said that subsequent economic conditions are beyond the scope of its knowledge. *Re Southern New England Teleph. Co. Docket No. 9480, September 13, 1957.*

"Race Inn" Wins Injunction to Compel Restoration of Telephone

AN Ohio court of equity granted a temporary mandatory injunction to compel a telephone company to restore telephone service to "Race Inn," from which telephones had been removed by the local police for alleged bookmaking activities. This discontinuance of service was accomplished without a hearing. Such practices are violative of our basic liberties and lead to deprivation of the rights of the innocent, the court declared. There is a presumption of innocence which abides with every citizen.

The telephone company argued that the subscribers had an adequate remedy at law under Ohio statutes which afford relief from unreasonable or unjustly discriminatory services by a public utility. The court indicated that it did not attempt to pass upon the commission's power to order the discontinuance of service in gambling operations after there has been a hearing in which the accused has had an opportunity to defend himself. It observed, however, that the statutory procedure would consume time during which the subscribers would be deprived of an essential piece of equipment in the operation of their place of business. There was thus no adequate remedy at law.

The court held that the subscribers had been deprived of their property rights without due process of law. The company was directed to restore service, while the subscribers were ordered to initiate action to have the case heard on its merits by the commission. *Laffer et al. v. Cincinnati & Suburban Bell Teleph. Co. 144 NE2d 158.*

Bookie Fails in Bid to Get Telephone Restored

THE New Jersey commission refused to require New Jersey Bell Telephone Company to restore service to a former subscriber. His residence telephone had been disconnected at the request of the county prosecutor because of the subscriber's bookmaking activities. Subsequently the company disconnected a public telephone at his place of business, a gasoline station, upon his failure to persuade the prosecutor to issue a letter of "no objection" to the transfer of the public telephone to the subscriber's name.

The company's tariff authorizes the termination of service upon objection by a governmental authority. The reasonableness of this provision has been previously upheld by the commission. In this case the company construed the prosecutor's refusal to issue the "no objection" letter as an objection to restoration of service. While the prosecutor indicated that he would not interfere with the company if it should restore service against his wishes, he made it clear that the company would be assuming the risk of indictment for aiding and abetting if the subscriber were to use the telephone for bookmaking.

It was noted, as held in previous opinions of the commission, that if a law enforcement official requests the discontinuance of telephone service to a party at one location, the necessary implication of such a request is that no telephone service should be given such party at any other location until he produces a letter of "no objection" from the law enforcement official. The subscriber's complaint was dismissed. *Perillo v. New Jersey Bell Teleph. Co. Docket No. 9912, August 29, 1957.*

In two other decisions handed down at about the same time, the commission similarly declined to order restoration of telephone service where bookmaking was involved. *Angier v. New Jersey Teleph. Co. Docket No. 9975, August 28, 1957; Magala v. New Jersey Bell Teleph. Co. Docket No. 10022, August 28, 1957.*

Substituted Service Conditioned upon Employee Severance Protection

THE California commission, in authorizing a transit company to discontinue rail passenger service between certain points and granting a transferee a certificate to operate substituted motor coach service between those points, conditioned the approval upon the companies providing employee severance protection. It had been found that the abandonment of rail passenger service sought was the logical, contemplated, and proximate result of a previous transfer of that service between the two parties.

A previous order had made both parties jointly responsible for service continuance and had required them to negotiate a contract for reasonable severance protection of employees affected. The parties had consummated such a contract and had obtained commission approval.

Dissenting Opinion

In a strong dissenting opinion, Commissioner Hardy, although concurring in that part of the order which authorized the substitution of motor coach service for rail service, felt that the majority went beyond its jurisdiction in establishing, as a condition for such authority, the same employee severance protection approved in a previous case. The commissioner felt it was, in effect, the enforcement of a private contract and beyond commission jurisdiction. Further, the commission does not have power to formulate labor-management employment policies, he said.

The commissioner saw but little difference between the commission fixing terminal benefits for utility employees and the fixing of wages where negotiations between management and labor break down, and a strike is threatened or exists. Certainly, he said, if the commission has such power, there will be frequent, if not constant, attempts by management, by labor, by municipal authorities, by chambers of commerce and other organizations, and by the general public, seeking the interposition of this commission to settle a strike by the fixing of wages paid the employees of a utility.

The majority's action appeared, to the dissenting commissioner, as an unjustifiable extension of authority, in the absence of a statutory mandate or judicial admonition. Organized workers, he said, have been provided by the laws of the state and nation with ample means of protecting their interests in their employment. It is important that the commission give proper consideration to the interests of the ratepayers, who have no other public authority to which they may look for their protection. Federal and state laws have established a clear policy of fostering the solution of labor-management disputes by collective bargaining in the avoidance of industrial strife.

In addition to the legal and philosophical elements involved, there were very definite and practical problems involved, should the commission enter into the field of labor-management relations as to the utilities regulated and controlled by it.

The commission was not staffed with experts in such highly specialized field.

Concurring Opinion

In a concurring opinion, Commissioner Untereiner felt that the commission should resolve the labor-management situation in the instant case, because it was created by the service substitution order of the commission. It was equitable to do so, and the terms of the severance protection contract had been previously agreed upon by all parties concerned.

However, the commissioner felt that the commission should refrain from injecting itself into the field of labor disputes in general. There is an absence of a clear legal mandate for such commission action; collective bargaining is the established and accepted method of resolving such disputes; and the commission's primary duty is to safeguard the interests of all people as customers of public utilities. *Re Metropolitan Coach Lines, Decision No. 54531, Application No. 37570, February 11, 1957.*

Section 5 of Interstate Commerce Act Construed

THE United States district court dismissed an action to set aside an Interstate Commerce Commission's dismissal of a complaint seeking to prevent the rerouting of a portion of through passenger train service and to compel the commission to consider and rule on the merits of the controversy. The court held that the arrangement for operation of through passenger train service by means of interchange of equipment did not require the approval of the commission.

Various clauses of § 5 of the Interstate Commerce Act make it lawful for two or more carriers to consolidate or merge their properties or franchises with approval and authorization of the commission. All paragraphs in the section, held the court, should be construed together, and no clause should be taken out of context.

The general purpose of § 5, pointed out the court, is to permit the lawful accomplishment of transactions otherwise made unlawful by law. The section is not applicable to interchanges of carrier equipment which do not effect control of two or more carriers in a common interest. One of the railroads involved could discontinue and another railroad could commence the operation of through passenger train service over its tracks by means of interchange of equipment under arrangements with connecting railroads, without securing commission approval.

The test of whether a transaction requires commission approval under § 5, said the court, is whether the transaction involves a consolidation or acquisition of control or management over two or more railroads in a common interest, and not whether it has an adverse effect on railroad employees.

Civil Aeronautics Act as Guide

The court thought one more matter deserved comment. The commission had consistently held that the through transit arrangements involved in a case such as this did not require commission approval under § 5. This administrative interpretation, said the court, is entitled to great weight. However, the plaintiff contended that even though the commission's interpretation of § 5 had been consistent over a period of years, the court should require the commission to adopt an interpretation of the Civil Aeronautics Board. The board had held, under comparable language of the Civil Aeronautics Act, that

it had jurisdiction over the leasing and operation by one airline of the aircraft of another line.

With equal logic, commented the court, it might be argued that the Civil Aeronautics Board should have followed the interpretation of the commission. The real answer is that the two acts are different. Congress clearly considered the regulation of air transportation to present quite different problems from those involved in rail transportation. It might have seemed to Congress that the ready interchange of rail equipment presented no such safety and operational factors as are so obvious in transportation by air. The commission's views of its problems did not depend upon what the board did in the administration of its act. *Railway Labor Executives' Asso. v. United States, 151 F Supp 108.*

Commission Refuses to Normalize Taxes Resulting from Accelerated Depreciation

THE Missouri commission, in authorizing a water company to increase rates which would produce a 6.15 per cent return on a depreciated original cost rate base, concluded that it was not authorized to allow as an operating expense more than the actual income tax liability which had been paid by the company. The company had exercised its option to use the declining balance method of depreciation.

Previously, the company had applied to the commission requesting an order authorizing accounting entries and specifying accounting procedures with respect to accelerated depreciation pursuant to § 167 of the Internal Revenue Code of 1954. The commission had granted such authority but had ordered that the accounting procedures provided for in that case should not be controlling for rate-making purposes.

The reason for the prior order, as stated by the commission, was that it was then uncertain what the effect would be on present and future rates if normalization of taxes were permitted to enter into the matter of rate making.

The commission concluded, in the instant case, that the income taxes resulting from accelerated depreciation, for rate-making purposes, should not be normalized by allowing as an operating expense an amount in excess of the amount actually recorded as a tax liability. Because the company had included the normalized tax, the amount was reduced accordingly.

Normalization of Revenues, Expenses, And Depreciation

The use of a rate base reflecting property at a specific time requires the statement of revenues and expenses on a going level as of that same time, pointed out the commission. This can be accomplished by normalizing revenues and expenses to reflect what they would be if all customers being served at the end of the period had been served throughout the test period.

Such normalizing of revenues and expenses, however, did not require or warrant increasing the reserve for depreciation, as the company had contended. If an additional amount was added to reflect what would have been in the reserve if the depreciable plant as it existed at the end of the period had been in service for the entire test period, the picture of a year's operations, based on property and on the number of customers who were actually being served at the end of the period, would be distorted.

Miscellaneous Considerations

Customers' advances and contributions in aid of construction were excluded from the rate base. Likewise refused was an allowance for cash working capital, since tax accruals available more than offset the amounts required by the company. The commission authorized the amortization of rate case expense over a 3-year period. Dues and donations were excluded from operating expense for the purpose of the rate proceeding. *Re Joplin Water Works Co. Case No. 13,592, September 4, 1957.*

No Injunction to Enforce Agreement Which Would Prevent Transmission Line Construction

THE Pennsylvania supreme court affirmed a lower court decision that property owners should not be granted an injunction to prevent other property owners from selling land to an electric company for the construction of a transmission line. The owners had previously entered into an agreement not to sell their land for this purpose. The company had acquired some land by exercise of the power of eminent domain, but the defendants in this action had agreed to sell their property because the company could not condemn it in view of a statutory prohibition against condemnation of property for a line which would pass within 300 feet of a dwelling thereon.

Construction of the proposed transmission line had been approved by the commission and its action had been upheld by the courts (12 PUR3d 477; 15 PUR3d 28; 17 PUR3d 370). The plaintiffs in this action had contested the right of the company to acquire their land but their objections had been overruled in Charch *v.* Pennsylvania Pub. Utility Commission (1957) 19 PUR3d 270.

Public Necessity Overrides Agreement

It had been made abundantly clear, said the court, that the transmission line was necessary for the service of the public. It was equally clear that since the company could not condemn the defendants' property because the proposed line would pass within 300 feet of a dwelling thereon, this over-all important project necessary for the public service, located throughout with the approval of the commission, must fail unless the company acquired this land by purchase. The court disagreed with a contention that equity might not sanction the breach by the individual defendants of their agreement with the plaintiffs. It was said to be well settled that a court will not enjoin the breach of an agreement where performance would be contrary to the public welfare.

The plaintiffs, appealing from the lower court, cited decisions in support of their case and quoted excerpts from judicial opinions. The court said that in the first place the language employed in each of the opinions must be related to the issue decided; when it goes beyond that it must be considered dictum. Moreover, even as dictum it did not, under the circumstances presented, support the contention of the appellants. The cases cited involved manufacturing plants and the public interest in the operation of the industry was not sufficient to overcome the complainant's right to enjoy the occupancy of his property free from the deleterious effects of the factory. The extent of the public interest and benefit was said to be the test.

In the instant case more than substantial benefit to the public was involved. The

court was concerned with the supply of light, heat, and power which are not merely beneficial but, as the commission had found, necessary for the public welfare. *Stellwagon et al. v. Pyle et al. 133 A2d 819.*

Stay Funds of Natural Gas Company to Be Refunded To Present Ultimate Consumers Only

THE court of appeals has ordered distribution of excessive collections by Northern Natural Gas Company under a stay order issued in the latter part of 1955 (11 PUR3d 203). The stay was terminated at the end of 1956 following the court's affirmance of a Federal Power Commission order reducing rates to distributors (14 PUR3d 193). The total amount collected under the stay order came to $1,561,887.13 with interest at 6 per cent. The company's distributors did not pass on to their consumers the reduction ordered in the charges by their supplier. The court therefore ordered a direct refund by Northern Natural to the ultimate consumers.

Recognizing "administrative practicality and necessary judicial-distribution reality," the court limited the refund to those ultimate consumers who were still customers of the distributors of Northern Natural and who were therefore still subject to billing. This distribution, it was held, would sufficiently satisfy the aim of the Natural Gas Act. That part of the refund moneys that was due consumers who were no longer customers of the distributors was ordered to be paid to the clerk of the court, to be used, in the court's discretion, to help pay distribution costs or for such other purposes as would serve the aims of the statute.

Some of the distributing companies urged that they were entitled to the stay fund, to retain for their own uses, on the grounds that their authorized rates were too low and that local regulatory authorities were agreeable to such a refund. The court indicated that the question whether the distributors' rates were inadequate was of no concern to it either generally or in the present proceeding. Their rates were a matter for administrative consideration. It was for the protection of the ultimate consumers that the stay order was issued. The distributors' request therefore was denied. *Northern Natural Gas Co. v. Federal Power Commission, 245 F2d 447.*

State Commission Again Denied Intervention in FPC Natural Gas Proceeding

THE New York commission was not an "interested state commission" in a certificate proceeding involving sales of natural gas on the Gulf coast, the Federal Power Commission ruled in turning down a petition by the state body for rehearing of a denial of intervention. The petitioner claimed that the sales would seriously affect the future price of gas in New York.

The petitioner did not make a sufficient showing that its intervention would be in the public interest. It urged, however, that it should be permitted to intervene as of right as an "interested state commission," noting that the federal commission had not expressly found in the earlier proceeding that it was not an "interested state commission," in the language of the

act. The commission thought a negative finding had been obviously implied but, to remove any doubt, made an express finding on the question.

Under § 15(a) of the Natural Gas Act, all interventions are discretionary, subject to the requirement that intervention be in the public interest, the commission observed. The ultimate ground for any intervention under the act, be it as of right, permissive, or otherwise, is that it be in the public interest. The subdivision of this requirement on the basis of a petitioner's position and interest, among other things, does not preclude the conclusion that one who cannot qualify for permissive or discretionary intervention on the ground of public interest cannot qualify for intervention as of right on the same ground. *Re Southern Nat. Gas Co. et al. Docket Nos. G-11234, G-12142 et al. August 16, 1957.*

"Reopening" of Consolidated Proceeding Denied

THE Federal Power Commission refused to reopen a natural gas certificate proceeding which had already been reopened and consolidated with other proceedings. The hearings in the consolidated proceedings had not been concluded. The two companies seeking the reopening and requesting allocations of gas from the certificate holder were parties to the consolidated proceedings.

It is wholly improper and unnecessary to "reopen" a proceeding which has already been reopened, the commission stated. This is particularly true, it was observed, where the case has been consolidated with other proceedings and the final decision must depend on evidence to be presented in the consolidated proceedings. The applicants' rights were fully protected inasmuch as their requests for gas allocations would be considered in the final decision. *Re Michigan Wisconsin Pipe Line Co. Docket No. G-2327, August 20, 1957.*

Dissenting Commissioner Strongly Attacks ICC Dictation In Fixing Intrastate Railroad Rates

THE Colorado commission granted a 5 per cent emergency intrastate freight rate increase to conform with a similar increase granted by the Interstate Commerce Commission to offset increased labor and materials costs. Commissioner Nigro, in a strong dissenting opinion, took exception. As a matter of intrastate commerce only, he thought the need for the increase was not supported by proof. As a matter of supporting interstate commerce, he called it highly discriminatory and unjust to the applicants themselves.

The alleged justification for not presenting evidence relating to intrastate capital investment, operating revenues, operating expenses, etc., said the commissioner, is that railroads must be treated as system-wide units, and that the interstate traffic and revenues are "inextricably commingled" with the intrastate traffic revenues and expenses.

The commissioner felt that the principal reason for the majority decision was not a different belief as to the railroads' failure of proof, but rather because they operated "under the compulsion of the Damoclean sword which eternally hangs

suspended over every state commission through the instrument of notorious § 13 of the Interstate Commerce Act."

"Jurisdiction by Courtesy"

Section 13, in effect, provides that state commissions may not impose an undue burden upon interstate commerce by providing a lower intrastate rate than the interstate rate, with resulting discrimination against interstate commerce. Intrastate traffic, being "inextricably interwoven" with interstate traffic, should bear its fair share of the total cost. If any state commission should impose a rate on intrastate traffic lower than the rate allowed by the ICC, pointed out the commissioner, upon proper complaint the ICC could proceed to deprive the state commission of its jurisdiction over such rates.

The Colorado commission, he said, was faced with the dilemma of granting a rate increase which, by the evidence, had not been justified. The commissioner did not say that the railroads could not make a *prima facie* case, simply that they did not. To him, it seemed to be a posture that carried the connotation of "jurisdiction by courtesy."

The state commission, in so far as it regulates rates on intrastate traffic or interstate railroads, does so with the permission of the Interstate Commerce Commission, and only if the increases are granted substantially to the same extent as those granted by the Interstate Commerce Commission. The commission thus became "a rubber stamp for the Interstate Commerce Commission with the persuasive force of a § 13 gun held" at the members' heads. *Re Freight Rates and Charges, Application No. 14969, Ex Parte No. 206, Decision No. 48393, July 18, 1957.*

Return on Future Construction Disallowed

A SMALL water company, citing the former frugality of its management as indicative of an urgent present need to improve and expand its system, requested the Connecticut commission to authorize an 83 per cent rate increase. The commission refused, commenting that the statutory authority under which it exercised jurisdiction did not permit it to provide a return on property which the owner contemplated would be dedicated to the public service at some time in the future. Any return on property not presently dedicated to public service would be denied, said the commission.

The company's requested working capital allowance, based upon a 200-day requirement, was cut down to forty-five days. Customer contributions in aid of construction were excluded from the rate base.

The result was a rate increase which, instead of an 11 per cent return, as requested, would yield a return of 6.18 per cent. *Re Ridgefield Water Supply Co. Docket No. 9502, September 4, 1957.*

Other Recent Rulings

Seven Per Cent Telephone Return. The rates of a telephone company, while reduced by the California commission because excessive, were allowed to remain

at a point sufficient to afford a rate of return of about 7 per cent upon a showing that the company planned to install additional equipment and improve service, and estimates of future operations were somewhat uncertain. *Re San Joaquin Teleph. Co. Decision No. 55408, Case No. 5766, August 13, 1957.*

Review of Interstate Commerce Commission Orders. The United States district court held that it may not set aside an order of the ICC authorizing a carrier to purchase the operating rights of another motor carrier, even though the reviewing court disagrees with the conclusions or considers them contrary to the weight of evidence, where the order is within the scope of the commission's authority and is based on adequate findings and substantial evidence. *Anderson Motor Service, Inc. v. United States, 151 F Supp 577.*

Certificate to Remove Culm. A Pennsylvania court held that the removal of culm from a coal company by a privately owned and operated dump truck is the removal of commercially valuable material which is not excluded by statute, and therefore requires a certificate of convenience and necessity. *Pennsylvania v. Kozak, 133 A2d 584.*

Taxi Fare Increase. The District of Columbia commission has authorized taxi fare increases sufficient to afford a 21 per cent increase in gross revenues, upon a showing that drivers earned only about 80 cents per hour (based on a 40-hour week) after allowance for taxicab operating costs, including 6 per cent on the value of equipment. *Re Rates and Zones for Taxicabs, Order No. 4385, PUC No. 2942/296, Formal Case No. 455, July 31, 1957.*

Reparation for Freight Charges. The North Carolina commission granted reparation to a shipper who paid excessive railroad charges, termed unreasonable and discriminatory by the commission, based on erroneous mileage tables filed in connection with railroad tariffs. *Coble (H. L.) Construction Co. v. Atlantic and Western R. Co. et al. Docket No. R-68, August 16, 1957.*

Municipal Plant Return. The Wisconsin commission authorized an interim increase of 20 per cent in rates of a municipal water utility, which would yield a return of 5.5 per cent on the rate base, the interim rates to be replaced by final rates upon substantial completion of plant additions. *Re City of Sheboygan, 2-U-4817, August 23, 1957.*

Bulk Cement Transportation. The Colorado commission authorized a motor carrier to transport only bulk cement where the existing intrastate service was inadequate to meet increased demands and where the sack cement hauling service of local carriers was not proved inadequate or unsatisfactory. *Re Southwestern Transp. Co. Application No. 15229, Decision No. 48572, August 26, 1957.*

Transfer to Municipality. The North Carolina commission authorized an electric company to transfer certain property, facilities, and equipment to a municipality where the area involved had been taken into the corporate limits of the city and the company did not have, nor was it likely to receive, a franchise to serve the incorporated customers since the municipality had its own electrical system. *Re Domestic Electric Service, Inc. Docket No. E-30, Sub 1, September 6, 1957.*

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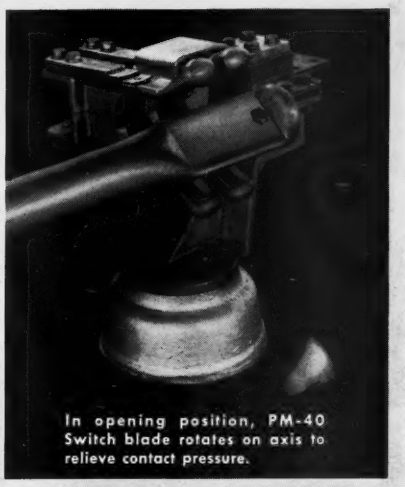

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Industrial Progress

chand ing and Markets Still essed n Telephone Industry Outlook

PPORTU ITIES and needs for pio- neerin in the telephone indus- are gre ter than ever before ac- ing to a recent statement by the ident of the American Telephone Telegraph Company, Frederick Kappel. He pointed out that the being used to give telephone ce are becoming more effective all me and as they expand telephone ms the result is not only more le served but more things to do he people who are served.

is apparent from statements and rams of various telephone com- s that a study of market and the nization, production and installa- of all kinds of new equipment, as as new maintenance methods, are given continued emphasis. The gence of a new telephone appli- or technical facility resulting in w form of service is only the start many things which the industry do before getting full benefit of nnovation in terms of additional nue and service improvements.

roduct installation and mainte- e for ew development must ob- sly fol w the final testing and ap- al of g inal plans and programs. hen at he operating level market eys n st furnish the basis for d and ntensive planning of rate tures o insure that the great ty of ew and improved services not o y selfsupporting but fur- there ter their fair contribution e in stry's overall revenue re- emen This in turn touches on lator pproval at state commis- level

dvert g and promotion to ac- nt the ublic with the availability w se ice, forms and methods is bviou step at this stage to keep progr moving. Final checkup and maintenance analysis with exacting reports on business experience through actual operations will then be needed to complete the cycle before the new business benefit can be fairly evaluated.

Among new services now available or in prospect for early promotion are mobile telephone service, microwave point-to-point communication, and a variety of business office facilities or telephone adjuncts such as recording and answering devices and special services such as hard-of-hearing telephones and signaling facilities. In short, the year ahead promises to be another year of intensive promotion of new business opportunities on an ever widening industrial horizon.

As far as actual construction plans for the future are concerned, there are included in the following pages selected excerpts from summarized programs of a number of independent telephone companies as well as comments concerning Bell system activities.

American Telephone and Telegraph Company (New York, N. Y.). The construction budget for Bell System Companies is built up step by step on the basis of most careful analysis and estimates, and it is under constant review. For that reason it is not possible to quote a firm figure for the construction program in 1958. However, the System's plans for new construction next year call for expenditures in about the range of the last two years. New construction in 1956 amounted to about 2¼ billion, and for 1957 approximately 2½ billion.

Big Timber Home Telephone Company (Big Timber, Mont.). This company, widely known as one of the "best little companies" in the independent telephone business, has announced its plant program for the coming year to include three carrier toll trunks (Big Timber to Melville), to cost about $9,000. It will also change to "two-five" numbering on subscriber stations on May 30th. This changeover will cost about $2,000. No additional subscribers are expected to be served during the coming year.

California-Pacific Utilities Company (San Francisco, Cal.). This company's telephone construction program for 1958 includes substantial outside plant improvement to the various exchanges operated in Needles, Colusa, and Westwood, California; Myrtle Creek, Canyonville, and Riddle, Oregon; and in Elko, Nevada. The Myrtle Creek exchange conversion from manual to dial operations will be completed in the early part of 1958, and the Canyonville dial system will be replaced with one having a larger capacity to provide for the increased demands of this fast growing area. In Colusa customer toll dialing will be instituted. In parts of the Elko area, heavy loaded suburban lines will be relieved by the installation of additional exchanges. The estimated cost of the telephone construction for all exchanges is $450,000.

Capital City Telephone Co. (Jefferson City, Mo.). This independent telephone company, serving the capital city of the state of Missouri, has announced construction plans for 1958 to include the following:

Additions to central office equipment consisting of 600 line equipments and 700 connector terminals at an estimated cost of $88,000.

(*Continued on page* 39)

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The City Public Service Board of San Antonio needed a new double circuit 138 KV line from a power plant to a sub station. But the sub station was centered in a highly developed area.

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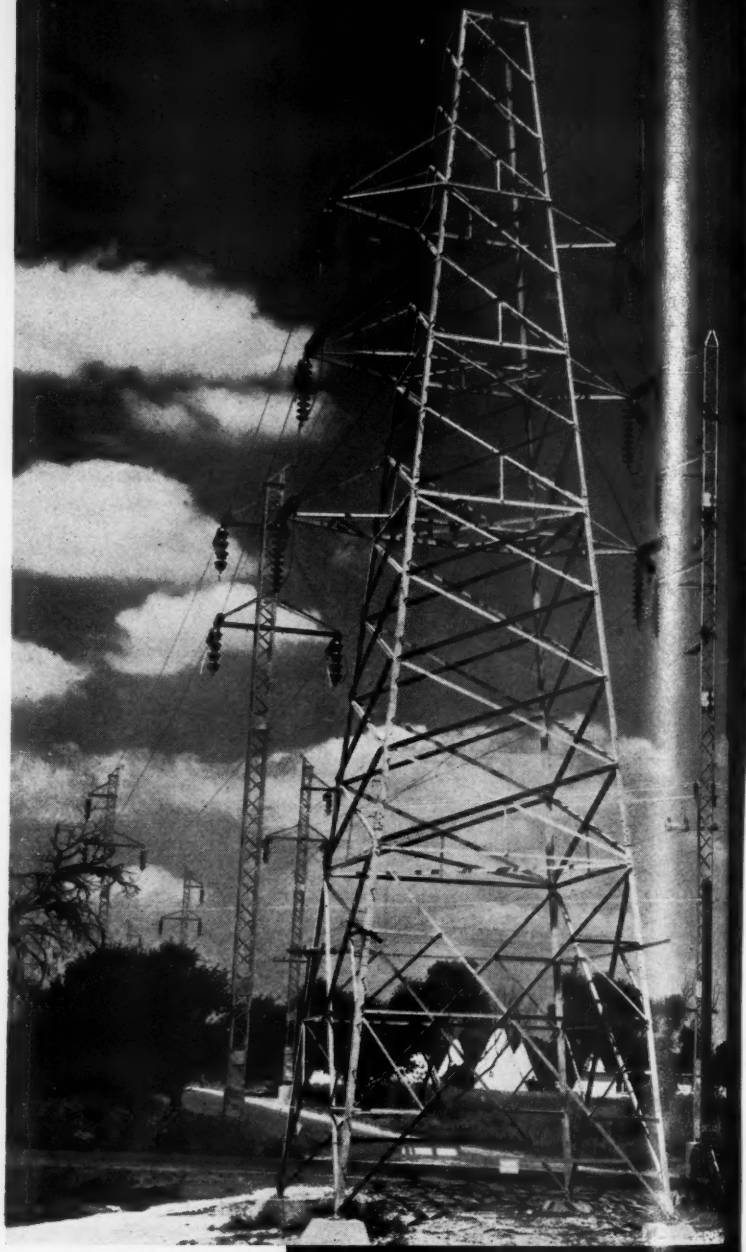

L. O[illegible]TE, VICE PRESIDENT AND PRODUCTION MANAGER

ANCHOR METALS INC.

HURST, TEXAS • FORT MADISON, IOWA

tension of underground conduit
n for approximately 6,100 feet
estimated cost of $30,000.
ditional cable to be installed in-
g cables in underground and
system estimated at $75,000.
scellaneous construction of rural
estimated at $20,000.

**rolina Telephone and Tele-
Company** (Tarboro, N. C.).
company has announced that one
largest construction and expan-
programs in its 57 year history
underway and on schedule. An
endent company, the Carolina
serves all or parts of 41 counties
tern North Carolina. The com-
installed its 150,000th telephone
late summer months.

This company's overall expansion program for 1957 will involve an expenditure of approximately $13 million which is on about the same level as the program undertaken during 1956. The 1956 program was the largest ever undertaken by the company.

To meet the continually increasing demand for telephone service in its operating territory during the past five years, the company has undertaken expansion programs involving gross expenditures of approximately $42 million.

Outside Plant Expansion

Largest single block of the 1957 program is earmarked for construction of additional outside plant. Over 265 major construction projects are scheduled throughout various areas of the company and many already have been completed.

1957 Rural Program

During 1957, as was the case last year, considerable emphasis is being placed on the company's rural telephone development. This year's rural program is a continuation of the 1956 program which resulted in a net gain of approximately 6,000 rural telephones.

Central Office Equipment

Second largest block of the total 1957 program is being used for purchase and installation of additional local dial and long distance equipment

(*Continued on page* 40)

This announcement is not an offer to sell or a solicitation of an offer to buy these securities. The offering is made only by the Prospectus.

$100,000,000

Southwestern Bell Telephone Company

Thirty-Five Year 4¾% Debentures

Dated October 1, 1957 Due October 1, 1992

Price 100.854% and accrued interest

The Prospectus may be obtained in any State in which this announcement is circulated from only such of the undersigned and other dealers as may lawfully offer these securities in such State.

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tober 2, 1957.

in various central offices. Either local or long distance equipment additions are scheduled to be made during the year in approximately one-half the company's 111 exchanges.

In about 25 of the company's exchanges, installation of additional equipment will result in conversion of these exchanges to the two letter and five digit system of numbering. On July 21, the company's last large manual exchange was converted to dial. Conversion of this Washington, North Carolina, exchange to dial leaves less than one per cent of the company's telephones still on a manual basis.

Also included in the company's 1957 expansion program is construction of a $2 million microwave system between Rocky Mount and Fayetteville. This system was placed in service early in July and provides a main communications artery to route long distance calls to and from eastern North Carolina.

Telephone Station Activity

Approximately $2½ million has been allocated for purchase and installation of telephone instruments and related wiring in homes and businesses throughout the company's territory. Last year, the company broke all previous records when it had a net gain of over 12,000 telephones.

Land and Buildings

Rounding out the company's program for 1957 will be allocation of approximately $1½ million for land purchases, construction of new buildings and building additions and purchase of necessary work equipment.

A total of 17 new buildings or additions to existing buildings will be constructed during the year.

Chenango & Unadilla Telephone Corporation (Norwich, N. Y.). The C & U Telephone Corp. serving all or part of ten counties in central New York state with headquarters at Norwich, New York, has spent an average of one and a quarter million dollars per year for the past seven years on plant additions and improvements. Seventy-five per cent of the 28,000 telephones served by thirty-three exchanges have been converted to dial operation. Operator toll dialing has been installed at toll centers.

During 1958 five additional central offices will be converted to dial operation. The company anticipates that it will be serving nearly 30,000 telephones by the end of 1958.

Chesapeake and Potomac Telephone Company (Washington, D. C.). Over three and one-half million dollars was appropriated recently by the board of directors of the Chesapeake and Potomac Telephone Company. This appropriation, which totals $3,525,000, will be used for plant additions and improvements.

According to H. Holmes Vogel, vice president in charge of the Washington Company, over $11,620,000 has been appropriated thus far this year for improvements and expansion required to meet the continuing demand for telephone service.

Citizens Utilities Company (Stamford, Conn.). This company operates manufactured and natural gas, electric, water and telephone properties in seven states from Maine to California. Its telephone properties are located in Arizona and California.

A $500,000 dial conversion program is budgeted for Kingman, Arizona, including a 900 line terminal per station dial system with full toll switchboard facilities. In California, a $750,000 construction program includes major additions to toll facilities and c[onversion] of the remaining three exch[anges] to dial. Also, an automatic toll t[icketing] ing installation will be comple[ted] the Elk Grove exchange near S[acra]mento. Automatic toll ticketing ties are also planned for the Rio and Ferndale exchanges.

The Columbia Telephone [Co.] pany (Columbia, Pa.). This pendent telephone company se[rves] southeastern Pennsylvania has nounced its plans in general f[or] coming year. It is estimated th[at] creased expenditures of $250,00[0] be made in new plant for 1958 sp[read] ing over all classes of service.

Commonwealth Telephone [Co.] pany (Dallas, Pa.). This comp[any's] construction forecast for 1958 t[otals] 545,000 compared with $2,187,00[0] 1957. Much of this expense is a tinuation of modernization o[f] quired property. The company a[lso] pates converting to dial operati[on] proximately 6,000 telephones in exchanges of Bangor, Millersbur[g] Kirkwood. The central office e[quip]ment for these exchanges has ordered and is scheduled for de[livery] during the year. The completio[n] these conversions means that th[e] cent Gary property acquisition w[ill] completely dial.

This company has experienc[ed] greatest period of growth durin[g] first 7 months of 1957 primaril[y] to reaching out and providing s[ervice] in areas which had been waitin[g] telephones for a number of yea[rs] is anticipated that growth wi[ll] more normal in 1958, yet even s[o] company is hopeful of adding be[tween] three and four thousand telepho[nes] its present 63,000 stations. The pany also points to its SAGE c[on]tion, the first for an independent phone company to be in complet[e] eration around the beginning o[f] year.

Commonwealth Telephone [Co.] pany of Ohio (Athens, Ohio) the past three years this compan[y] added approximately $500,000, its plant annually. For 1958 it ex[pects] to spend approximately $500,00[0] expansion and improvements. dial conversion is planned for Conversion to "two-five" numb[ering] is planned for three exchanges.

Florida Telephone Corpor[ation] (Ocala, Fla.). This company, o[f]

(*Continued on page* 41)

LEE
TELEPHONE
COMPANY

*"Through Service
We Grow"*

MARTINSVILLE, VIRGINIA

ost rapidly growing independent hone companies in the country, s the heart of Central Florida. ugh an extensive network of any-owned local facilities and distance lines, eighteen exchanges ive rural sub-exchanges, it fur- s telephone service to approxi- ly 120 cities, towns, and com- ties in eight counties in progres- Central Florida—"Empire of the and Heart of Citrus Land."

development and growth has on the phenomenal side since Telephones in service have in- ed from 7,642 at the end of ld War II to 35,843 as of July 1, an increase of 28,201 or 369 per In the next five years based upon nt rate of growth it is estimated 22,000 additional telephones will ded. Along with the rapid expan- of facilities the company has also engaged in a vigorous and for- looking mechanization program, ving the conversion of all of the ining manual exchanges to dial, fication to "two-five" numbering, he establishment of customer or t distance dialing. An extensive relay microwave toll network has also been established. At the end of 1956 the system was 80 per cent dial and by the end of 1957 will be nearly 100 per cent dial under the mechanization process.

Gross construction in the post war period amounts to approximately $19,000,000 and there have been 23 securities issues over the period, consisting all 11 bond issues, 2 preferred stock issues, and 10 common stock issues. Under the ten common stock issues over the period, the number of common stockholders has increased from 74 at the end of 1945 to over 2100 at the present time, and the stock is widely held in 37 states. The company's principal underwriters in security issues have been Kidder, Peabody & Co. and Merrill Lynch, Pierce, Fenner & Beane.

General Telephone Company of the Southwest (San Angelo, Texas). A milestone of major importance was reached recently by General Telephone Company of the Southwest with the installation of its 250,000th telephone.

General Telephone Company of the Southwest has made rapid strides since it was first organized in Lubbock in 1926. At the time of organization, the company was serving 7,000 telephones in Texas and New Mexico through thirty-three exchanges. At that time there were 177 employees. Today, 3,700 employees work at the general office in San Angelo and in the 264 exchanges located throughout Texas, New Mexico, Oklahoma, Louisiana, and Arkansas; and the company serves 250,000 telephones.

General Telephone Company of the Southwest is the largest Independent telephone company in the Southwest and is the fourth largest company in the General Telephone System, a network of companies serving three million telephones in thirty states. General of the Southwest is second only to General of California in the System in rate of growth.

According to E. H. Danner, company president, so far this year the company has gained over 7,500 telephones and expects to gain over 12,000 more before the end of the year, through internal growth. The company was serving 40,000 telephones

(*Continued on page* 42)

WESTERN CAROLINA TELEPHONE COMPANY is one of the larger regional operating telephone companies in North Carolina, operating 19 exchanges with approximately 12,000 stations. The company serves all or a portion of 11 counties in western and southwestern North Carolina which are: McDowell, Yancy, Mitchell, Madison, Buncombe, Jackson, Swain, Graham, Cherokee, Clay and Macon, North Carolina and Rayburn County, Georgia.

NORTH CAROLINA TELEPHONE COMPANY operates 9 exchanges in the south central portion of North Carolina, having in service approximately 5700 stations, and serves all or a portion of Eastern Mecklenburg County, Union County, Anson County, and Stanley County.

The territories of both companies are in a rather rapid growth period due to the diversified type of industry and agriculture in their respective areas. Inquiries are invited from institutions and industries interested in plant sites in this section of the South, as well as individuals interested in relocating on account of retirement.

WESTERN CAROLINA TELEPHONE COMPANY
NORTH CAROLINA TELEPHONE COMPANY

Inquiries should be addressed to the President's Office, Box 38, Matthews, North Carolina.

at the end of the second world war, only 3 per cent of which were dial operated. Today, just twelve years later, 78 per cent of the 250,000 telephones are dial operated in the company. The company's budget for 1957 and 1958, which is in excess of $30,000,000, is better than one-half of the total telephone plant investment of the company as of December 31, 1956.

General Telephone Service Corporation (New York, N. Y.). This service corporation reports that operations for 1958 for General Telephone System telephone subsidiaries are expected to slightly exceed 1957 results after taking into consideration the acquisition of Peninsular Telephone Company in July 1957. Gross construction for 1958 is now estimated at $200,000,000 (65 per cent in central office equipment and outside plant), net additions at $165,000,000 and a telephone gain of 250,000 is anticipated. Dial service will increase from an estimated 84 per cent at the end of 1957 to 86 per cent at the end of 1958 and at the close of 1958 the System will be operating about 3,600,000 telephones.

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WASHINGTON NEW YORK KANSAS CITY

Grand River Mutual Telephone Corporation (Princeton, Mo.). In 1958 this company will complete an operation, just now starting, that will provide dial service to about 2500 customers on a completely new system in Decatur and Wayne counties in Iowa. Several contracts have not been let as of this date, but the investment will probably slightly exceed $1,000,000. Nine manual exchanges will be replaced with six dial exchanges.

Work probably will be completed on three new dial systems to replace three manual exchanges in Linn county, Missouri. Approximately 1200 customers will be affected with an investment estimated at $600,000. Completion of these two projects will complete the replacement of thirty-nine manual exchanges with twenty-eight dial exchanges, providing service to 13,000 customers over a completely new system. The first dial conversion made by the company was on August 15, 1955.

The Hawaiian Telephone Company (Honolulu, Hawaii). This company, operating more than 160,000 telephones, has completed its full conversion to dial operation. The firm, which serves the entire territory, pioneered in the adoption of Strowger dial equipment as long ago as 1910.

The last magneto telephone in the islands has been replaced by Strowger equipment at Kamuela, on the "Big Island" of Hawaii. The community, located in the rich range country of the Waimea Plateau, is the site of the second largest cattle ranch in the world.

Hawaii has long played an historic role in the pioneering of telephone service. The Islands' first telephones were installed on the island of Maui in 1878 . . . only three years after Bell first managed to transmit speech sounds over a wire. In 1883, King Kalakaua, then monarch of the island, chartered the firm now known as Hawaiian Telephone Company.

In 1898 Hawaii was annexed as a Territory by the United States and 12 years later installed one of the early Strowger dial exchanges. The Hawaiian Telephone Company, known as Mutual Telephone prior to 1954, has kept pace with the swift economic growth of the Territory and, at the same time, has consistently worked toward complete modernization of its far flung facilities.

Since World War Two i more than trebled its numb telephones in service. In ad to the company's heavy volu inter-island and local traffi operators last year handled than 205,000 trans-Pacific cal

Last year Hawaii Tele Company spent $6,550,000 fo plant construction. The poi modernization attained by the pany is pointed up by the fac 63 per cent of the value of its plant in service is represente dollars expended for constru in the past six years.

In 1956 the total value of H ian Telephone's plant was esti at nearly $60,000,000.

Illinois Bell Telephone Com (Chicago, Ill.). Construction equipment outlays will reach $ 000,000 this year, and will co through 1958 at somewhere ne same level, according to W. V. er, president.

The consistent rise in long di usage requires sizable additions inter-city networks. Conversion remaining manual exchanges to and equipping additional centra fices to enable customers to dial of their calls to distant points proceeding on an orderly basis Kahler stated.

The company installed its 3 lionth phone the end of Septe Telephones installed during the nine months averaged a gain of s ly fewer than 700 per business decline from last year's 800 pe rate. But the installation of 130,500 phones in the first months exceeded the rate of any first nine-month period since 19

Lee Telephone Company (tinsville, Va.). This progressive pendent telephone company re general telephone service thr fifteen dial exchanges, ten of w are located in Virginia and fi North Carolina. All of these changes are interconnected by m of its own toll lines. At June 30, it had 22,915 company owned phones which were connected t foregoing exchanges.

Buildings	$2
Central office equipment and toll circuits	2
Expansion of cable facilities	2
Station apparatus	1
Pole lines	1
Aerial wire	1
Total	$9

(*Continued on page* 43)

xington Telephone Company ington, Va.). During the year Lexington Telephone Com- plans to complete the con- on to dial of the Brownsburg, nia, Exchange where a num- new applicants will be served all existing subscribers on eto service will be converted l and many will be regraded igher grade of service.

e company also plans mis- eous rural line extensions ghout the exchanges of gton, Buena Vista, Natural e and Glasgow to add new subscribers. Additional cable has been planned which will de service for new applicants will provide the necessary ties for regrades of present ribers.

is planned to change the dial nges of Buena Vista and Na- Bridge to "two-five" number- thereby making all five ex- ges of the Lexington Tele- e Company "two-five." There be considerable rehabilitation and line extensions in all exchanges which will provide for an anticipated growth of some 450 additional subscribers during the year 1958.

The number of telephones in the Lexington Telephone Company has grown from 4,972 in the year 1952 to 6,318 stations in May of 1957. It is anticipated that this growth plus the anticipated growth for 1958 will give the company a total of 6,768 stations in 1958.

The Lincoln Telephone and Telegraph Company (Lincoln, Neb.). One of the largest and oldest independent telephone companies in the United States, the Lincoln company plans a $6,000,000 extension and improvement program for 1958.

Eight exchanges serving 6,500 telephones will be converted to dial operation and ten new buildings will be erected. Dial conversions include area headquarter exchanges of Auburn, Wahoo, David City and Hebron where direct distance dialing will also be instituted to about half the telephones in the state. This year the company inaugurated DDD in Nebraska from its Beatrice exchange and four nearby CDO exchanges.

Construction will start on an addition to the general office building at Lincoln. The present three-story structure will be extended to eight stories and four stories eastward will be added. Following completion of this building, installation will start on intertoll train modification for direct distance dialing at Lincoln. Toll ticketing control positions and four information positions will be added to the switchboard.

The company's first micro-wave radio systems for message transmission will be installed next year to connect Lincoln, Beatrice, Wahoo and David City. These will be the first such systems in Nebraska with intrastate terminations. They will be in addition to micro-wave installations now in use for television at Lincoln and Hastings. Over 80 long distance circuits by wire and carrier will also be added.

Local facilities will be expanded next year by line additions designed to serve about 6,000 new main sta-

(*Continued on page* 44)

AN INDUSTRY growing at the rate of about one million dollars in investment per month PROVIDING MODERN COMMUNICATIONS through 111 exchanges in eastern North Carolina OPERATING over 150,000 telephones, 99% of which are dial telephones

CAROLINA TELEPHONE and TELEGRAPH COMPANY

tions. Cable extensions and additions will amount to $700,000.

Comparatively, the Lincoln company is among the eleven largest Independent telephone companies in the United States and is the largest Independent in Nebraska. A $42,000,000 company, it has doubled its investment in the last nine years and now operates 131,000 stations of which 81% are dial. Target date for 100% dial operation is 1962.

Linn County Telephone Company (Lebanon, Ore.). This is a small company of 8 000 subscribers but its construction plans for the coming year are relatively substantial. In February of 1958, it will complete installation and place in operation an automatic timing and ticketing installation for direct distance dialing. This is Satt equipment. It will automatically time and ticket toll traffic between Lebanon, Sweet Home and Brownsville to the toll center and its tributaries. A new 15 mile, 7 circuit toll line will also be completed and placed in service at the same time.

The foregoing operation will be supplemented by additional cable plant, replacement of vehicles and increased station equipment for 200 subscribers. The total 1958 construction program is estimated to amount to $210,000.

Long Lines Department (Bell System). The American Telephone and Telegraph Company launched a new enterprise September 30, 1957, with the signing of contracts with German and French agencies for construction of an undersea telephone cable system between this continent and Europe.

The spectacular success of the first transatlantic telephone cable system, opened for service in 1956, prompted the move, according to Frederick R. Kappel, president of A. T. & T. He said construction of the new system would start immediately and would be completed in 1959.

Parties to the contract include the French Ministry of Posts, Telegraph and Telephones; the German Federal Ministry for Posts and Telecommunications; Eastern Telephone and Telegraph Company and A. T. & T. The French and German agencies a sponsible for telephone services in their respective countries. E Telephone and Telegraph Com a Canadian subsidiary of A. T. now owns jointly with Can Overseas Telecommunication C ration and the British Post Of radio relay system from the U States to Sydney Mines. Nova tia, which will be used by the system.

The new cable system will the same design as the first tra lantic link which connects the U States and Canada with Engla similar cable system now operate tween the States and Alaska an other extending from Californ Hawaii was opened for servic cently. The new transatlantic s will consist of twin cables—o carry speech west to east an other to carry speech east to Each cable will contain built-in a fiers situated about 40 miles apa

The cable will be able to 36 simultaneous conversations. agreements signed recently pr

(*Continued on page* 45)

Happy Birthday

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page 45)

3 of the circuits are to go to
e and 13 to Germany. The re-
ng 10 circuits are reserved for
sion to other countries in Eu-
Mr. Kappel said.
e cables will cross the Atlantic
en Newfoundland and the Brit-
peninsula in France.
he introduction of the first un-
as telephone cable, which links
continent to Great Britain and
reat Britain with eight countries
e continent, has been an unquali-
success," Mr. Kappel said. "In
han a year, traffic to Great Brit-
as gone up 100 per cent and
to the continent 50 per cent."
. Kappel also cited these facts
the new cable system:
It will cost about $40,000,000.
-four per cent of the cost will
rne by the American Company,
emainder by the French and
ans.
Construction of the system will
nder direction of the American
pany.
Both cables are to be laid in the
ner of 1959.
. Kappel pointed out that on the
American continent, the cir-
cuits would follow the route of the first transatlantic system. They will be carried by radio relay from the United States to Sydney Mines, Nova Scotia, thence by cable across Cabot Strait to Clarenville, Newfoundland, where the cable from France will terminate. East of Newfoundland, the cable will follow a different course across the Atlantic.

The deep-sea portion of the second transatlantic system will be some 2,400 miles in length. The first cables, which cross the Atlantic between Clarenville and Oban, Scotland, are about 2,200 miles in length.

The Newark Telephone Company (Newark, Ohio). This independent telephone company which serves exchanges at Newark, Granville, Hanover, St. Louisville and Gratiot, estimates that its 1958 construction program will cost approximately $350,000, featuring a cut over to nationwide toll dialing in July, 1958.

North State Telephone Company (High Point, N. C.). This company is continuing its large expansion program. In the past ten years it has spent about $5,000,000 in enlarging the plant and system and has grown from 10,000 telephones to 30,100 telephones. It will spend about $1,050,000 in further plant expansion during the next two years which should bring it close to 34,000 telephones at the close of the year 1959.

Northern Kansas Telephone Company (Nortonville, Kans.). During 1957 this company plans to complete an investment in excess of $1,700,000.00 in new telephone plant and equipment. This includes converting to dial thirteen small exchanges which serve approximately 4,500 rural subscribers. This conversion requires completely rebuilding the entire outside plant in each of these exchanges as well as the construction and addition of new dial central office exchange buildings.

The company also will have acquired four additional exchanges, namely Lane, Parker, Greeley and Centerville, by the end of October. These four exchanges are located in east central Kansas.

(*Continued on page* 46)

P.U.R. QUESTION SHEETS

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Investment $15,000.00 — Over $2,000,000 1957 Budget — Nearly 35,000 Telephones — Local Service 100 Per Cent Dial — Customer Direct Distance Dial Toll Service — Mobile Telephone Service — Radio-Telephone Service — Nearly 500 Employees — More Than 20,000 Miles of Toll Channels (4 Microwave Systems) — 1,000 Miles Rural Telephone Subscriber Carrier — 75 Per Cent of Plant Installed In Last 5 Years, 99 Per Cent In Last 10 Years — Over 1,500 Stockholders — Station Growth (Percentagewise) Greater Than Other Florida Companies for 3 Years.

It also has under contract to purchase thirteen exchanges from the United Telephone Company in southeastern Kansas, effective January 1, 1958.

Peninsular Telephone Company (Tampa, Fla.). This large independent telephone company, control of which was recently acquired by the General Telephone System, has served Florida's central west coast since 1901. The company's budget for 1958 is being prepared on the basis of meeting the continuation of this area's growth and will total approximately $25,000,000. It is estimated this amount will be required to provide the plant and central office expansion along with building additions to meet an estimated net increase in the number of telephones served of between 30,000 and 35,000.

The Peoples Telephone Corporation (Butler, Pa.). This independent telephone company serving northwestern Pennsylvania has announced the following estimate of present and proposed construction:

Buildings	$ 30,000
Central office equipment	200,000
Aerial cable	250,000
Underground cable	100,000
Aerial wire	75,000
Pole line	150,000
Station apparatus, etc.	150,250
Total	$955,250

Rock Hill Telephone Company (Rock Hill, S. C.). This company's program for 1957 amounts to $402,188, of which $224,715 is for outside plant facilities. During 1958 the company has planned plant additions amounting to $398,160 as follows:

Plant and building	$ 80,000
Central office equipment	187,310
Subscriber equipment	76,650
Outside plant	49,000
Vehicles, furniture and fixtures and tools	5,200
Total	$398,160

San Marcos Telephone Company (San Marcos, Texas). This company will continue rural construction and extension of cable plant into the new subdivisions of the town of San cos, Texas, for a total of outside expenditures of approximately 000 during 1958. The compan on order a 200 line addition Stromberg-Carlson XY dial which it hopes to have installed in 1958. Toll circuits and exte area service circuits are being to Martindale, Staples, Ma Fentress and Prairie Lea areas tal cost of these additions will proximately $75,000 during 19

Tidewater Telephone Com (Warsaw, Va.). This company construction expenditures of $1 000 during 1958. Included in program is the installation of BD Satt equipment at Warsaw will provide direct distant d service to 17 exchanges toll ce at the company's Warsaw office

United Utilities, Incorpo (Kansas City, Mo.). During and 1958 the estimate of cust gain and gross additions to the pany's plant is as follows:

(*Continued on page 47*)

Florida Telephone Corporation Serves An Area of Almost 6,000 Square Miles In Central Florida—"Empire of the Sun and Heart of Citrus Land"

One of the larger, most rapidly growing, and most progressive independent telephone companies in the country, in one of the fastest growing sections of the nation.

Operating an extensive network of company-owned local facilities, microwave radio relay and long distance lines, eighteen exchanges and five rural sub-exchanges in eight counties in the heart of progressive Central Florida.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (39 U. S. C. 233) SHOWING THE OWNERSHIP, MANAGEMENT AND CIRCULATION of Public Utilities Fortnightly published fortnightly at Baltimore, Maryland for October 1, 1957.

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Editor-in-Chief: Ellsworth Nichols, Rochester, N. Y. Managing Editor: Francis X. Welch, Washington, D. C.

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A. S. Hills, Business Manager

Sworn to and subscribed before me this 23rd day of September, 1957.

Josephine A. Olker
Notary Public

(My commission expires August 31, 1958)

	1957	
Customers Gained:		
Telephone	(1)	37,800
Electric, Water, Gas & Propane		1,600
Total	(1)	39,400
Gross Additions to Plant:		
Telephone		$19,300,000
Electric, Water, Gas & Propane		1,700,000
Total		$21,000,000
	1958	
Customers Gained:		
Telephone		17,000
Electric, Water, Gas & Propane		3,000
Total		20,000
Gross Additions to Plant:		
Telephone		$20,000,000
Electric, Water, Gas & Propane		2,000,000
Total		$22,000,000

Includes approximately 21,300 ...ons acquired during year.

...he company's 1958 construction ...gram will be primarily one of con... ...ng manual telephone exchanges ...al operation. During 1958, 32 ex... ...ges, serving approximately 65,... ...telephones, are scheduled for dial ...version and customer toll dialing ...be provided for several thousand ...phones.

...hio Independent Telephone ...sociation Schedules District Meetings

...ERIES of six district public re... ...ns meetings for members and ...ts of the Ohio Independent Tele... ...he Association will be held ...ughout the state during October ... November, according to Daniel ... DeHayes, executive vice presi... ... Columbus.

...eetings this year will be held at ...n, October 23; Aurora, October ... Cambridge, November 7; Rus... ... Point, November 13; Chillicothe, ...ember 20; and Norwalk, Novem... 26.

...eatured speaker at each of the ...ings will be Richard J. Anderson, ...stant to the director, Battelle ...morial Institute, nationally recog... ...d independent scientific research ...nization, Columbus. A member of ... Battelle staff since 1948, Ander... will speak on the subject "Your Bark Is Worse Than Your Bite," a combination of techniques and humorous examples showing how good communications is the key to better understanding in day-to-day living.

James I. Hunt, president of the Ohio Independent Telephone Association and also president of the Home Telephone Company, Middlefield, will act as toastmaster at each of the meetings.

This is the fourth consecutive year that the Association has held this type of meeting in each of its districts for the purpose of keeping its membership informed on the latest developments in public relations. The 106 member companies comprising the Ohio Independent Telephone Association are currently serving more than 750,000 customers in 70 per cent of the state's land area.

Bell System, Independent, Companies Joint Fair Exhibit

TWO of America's great communications systems, The Pacific Telephone and Telegraph Company and General Telephone Company of California, combined forces at the Po-

(*Continued on page* 48)

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mona Fair to provide a colorful exhibit displaying new developments in the telephone industry. The Fair was held September 13 to September 29.

The theme of the telephone exhibit stressed the cooperation which exists between these two leading communications systems.

The latest in telephone equipment being displayed this year, included the Dialaphone (which automatically dials telephone numbers); the electronic secretary; the "hands-free" telephone; school-to-home telephone system (permitting handicapped students to attend school from their bedsides); the hearing aid instrument and a new type of intercommunicating system for use in homes and industry.

Interesting demonstrations were also conducted by the two companies. One demonstration, for example, took the viewer through the course of a telephone call, showing the switching and automatic toll ticketing equipment in action. The audience was able to see how information is automatically recorded on a punched tape when a toll call is placed.

The "Hear Your Voice" unit permitted guests to speak into a transmitter and then hear their voices played back to them on a recorder.

The Pacific Telephone and Telegraph Company operated a section of the display which featured free long-distance telephone calls to any point in the United States. These calls are offered at frequent intervals to demonstrate the convenience and economy of present day long distance communication.

Visitors to the telephone display booth saw a colorful array of telephone instruments, including three new colors Forget-Me-Not: blue, Camelia pink and Gardenia white. Other colors include beige, turquoise, red, yellow, ivory, dark blue, green and grey.

Bell Laboratories Discovers New Process for Bonding Plastics to Rubber and Metals

THE world's most widely-used plastic can now, for the first time, be satisfactorily joined directly to rubber, brass or brass-plated metals.

Bell Telephone Laboratories reported recently that an adhesive many times stronger than any currently used for this purpose makes it possible to achieve a lasting bond between polyethylene and brass or natural and some synthetic rubbers.

Polyethylene, the amazing versatile plastic, has found a place in every American home since its discovery in the Thirties. It is used to make squeeze bottles for cosmetics, baby bottles, pliable hose and utensils ranging from sieves to dust pans. It is wrapped in thin sheets around fresh fruits and vegetables and other products displayed in stores. One of its principal industrial applications is its use as a covering for telephone cables.

For many years industry has needed a strong adhesive to use with polyethylene. Research at Bell Laboratories has resulted in a simple bonding process that fills this need.

Based on a synthetic material known as "partly hydrogenated polybutadiene," the adhesive is so strong it will resist a pull of approximately one thousand pounds per square inch, much greater than present day pressure-sensitive adhesives.

The application of the polybutadiene product as an adhesive and the physical processes necessary to make this possible are the work of Henry Peters of Bell Laboratories' chemical research department.

The bonding is accomplished with heat ranging from 250 to 350 degrees Fahrenheit and pressures of one hundred pounds per square inch or less, although higher temperatures and pressures may be used. The process may be extended to plastics related to polyethylene, Bell Laboratories reported.

More than 550 million pounds of polyethylene were produced last year. Industry experts estimate that it will become the first billion-pound-a-year plastic and that this level of production may be achieved by 1960. It is expected that the bonding agent will greatly increase the applications of polyethylene products.

The bonding agent will be of considerable value to the Bell Telephone System and to the plastics and rubber industries. Some of its major applications may be: the bonding of insulation to conductors in plastic "drop wire" used to extend telephone service from the line to the home, and in the bonding of polyethylene to brass in submarine cable repeaters (amplifiers) for underwater telephone cables.

Other significant uses will be the bonding of linings to tanks and the bonding of polyethylene coatings on plating racks or wherever else they are needed.

The process will protect metals from corrosion since the polyethylene can be fixed directly upon the metal without the use of intermediate ma other than the adhesive.

The need for such an adhesiv been particularly acute in such munication equipment as und telephone cables, which must be structed to resist both pressure water. To bond natural rubber to ethylene in these cables it has necessary to use four interme layers of polyethylene and na rubber mixtures. This complex b ing process can now be elimi since the new process requires on adhesive to join rubber and ethylene together.

New Brush-on Preservati Developed by Androc Chem

Fast, low-cost supplementary t ment of in-service utility poles d removal operations caused by widening or other reasons is now sible, according to the Androc Ch cal Company, with a new brus type penta preservative develope the firm.

A spokesman for the Minnea chemical company said that the brush-on preservative contains identical toxic ingredients as P Creo Paste which was introduce the firm to the utilities field about years ago.

Active ingredients include pentachlorophenol, (by weight) osote and sodium fluoride with p trating agents added. The product a consistency approximating a h cream, assuring a good heavy pr tive coating to the pole being tre

The new brush-on preservative be used only where no painting is quired.

The company spokesman added the brush-on type has several ad tages not found in paste when u for supplementary treatment of type. These include speedier appl tion, easier handling, faster pen tion and lower cost.

Androc Polewrap, which is used tensively with the Penta-Creo Pa is suggested to assure longer in-s ice pole life. However, it is not no sary, the Androc spokesman s Polewrap is wrapped around treated portion of the pole and tened securely with staples.

Suggested application procedure the brush-on preservative incl vigorous brushing with a stiff w brush to remove all rot pockets; ap cation of the preservative with a br from 18" below ground level to above ground line. Samples avail upon request.

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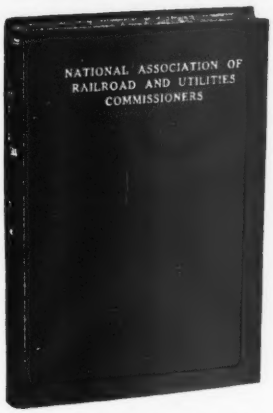

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